REPORT RESUMES

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THE NEBRASKA STUDY OF THE SYNTAX OF CHILDREN'S WRITING, 1966-67, VOLUME III.

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THE THIRD PART OF THE NEBRASKA CURRICULUM DEVELOPMENT CENTER'S ANALYSIS OF THE SYNTAX OF CHILDREN'S WRITING FOCUSED UPON (1) HOW THE SYNTAX OF THIRD- AND SIXTH-GRADERS COMPARED WITH THAT OF PROFESSIONAL WRITERS, (2) WHETHER OR NOT THE RATE OF GROWTH IN CERTAIN SYNTACTIC SKILLS VARIED SIGNIFICANTLY AMONG GROUPS OF CHILDREN IN VARIOUS LANGUAGE ARTS PROGRAMS, (3) WHETHER OR NOT CHILDREN WHO INITIALLY DISPLAYED ADVANCED SYNTACTIC SKILLS ALSO SURPASSED THEIR PEERS IN PROGRESS RATE, AND (4) WHETHER OR NOT GIRLS' WRITTEN SYNTAX DIFFERED FROM THAT OF BOYS. THE COMPOSITIONS ANALYZED WERE WRITTEN BY 180 CHILDREN IN THREE LANGUAGE ARTS PROGRAMS--(A) AN INTENSIVE-TREATMENT PROGRAM AND (B) A MODERATE-TREATMENT PROGRAM, BOTH BASED UPON THE NEBRASKA ENGLISH CURRICULUM, AND (C) A CONTROL PROGRAM CONTAINING NO "NEBRASKA" UNITS. RESEARCH LIMITATIONS WERE THE REPRESENTATION OF ONLY MIDDLE-CLASS STUDENTS OF LINCOLN AND OMAHA SCHOOLS, THE SELECTION OF THE NEBRASKA PROGRAM TO BE TAUGHT, AND THE USE OF TEACHERS IN PROGRAM A WHO WERE BETTER TRAINED IN THIS CURRICULUM THAN THOSE IN PROGRAM B. THE STUDY REVEALED THAT (1) THE SYNTAX OF HIGH-I.Q. CHILDREN AND THE SENTENCE TYPES OF LOW-I.Q. CHILDREN CAME CLOSEST TO THE "PROFESSIONAL" STANDARDS, (2) THE INTENSIVE-TREATMENT PROGRAM AT BOTH GRADE LEVELS YIELDED THE GREATEST DIVIDENDS IN THE RATE OF GROWTH OF SYNTACTIC SKILLS, (3) A HIGH NEGATIVE CORRELATION EXISTED BETWEEN PRE-TREATMENT SYNTACTIC PERFORMANCE AND IN-TREATMENT SYNTACTIC GROWTH, AND (4) GIRLS' SYNTACTIC SKILLS CONSISTENTLY OUTRANKED THAT OF BOYS. (RD)

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VOLUME III

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July 1967

The University of Nebraska
Nebraska Curriculum Development Center

This study was made possible by a grant from the Louis W. and Maud Hill Family Foundation, St. Paul, Minnesota.

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VOLUME III

THE NEBRASKA STUDY
OF THE SYNTAX OF CHILDREN'S WRITING, 1966-67

Nell C. Thompson, Co-director
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The research project reported in Volume III was conceived and planned by Nell C. Thompson who assumed major responsibility for the 1966-67 segment of The Nebraska Study. The findings reported in Volume III also appear in her doctoral thesis.

ACKNOWLEDGMENT

Credit for this study belongs to many persons: the project team; personnel of the Nebraska Curriculum Development Center; linguists; statisticians; and especially, to the many teachers and administrators of the Lincoln and Omaha Public Schools who made this research possible. It is hoped that the findings of the study will prove to be of value to them and to all educators in their search for ways to improve the quality of education in our schools.

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CHAPTER I

THE PROBLEM AND DEFINITION OF TERMS

How much research information is available about the complex intellectual process known as "writing"? The answer appears to be: "Very little." Past research seems to have explored only a small segment of the vast realm of language. In recent years linguists, psycholinguists, psychologists, and language educators have designed new tools which may prove to be of considerable value to present and future researchers as they attempt to analyze language more precisely. Currently, through the nation, there seems to be an increased interest in language development and in language instruction in the elementary school. Oral language has received more research attention recently than has written language; however, this greater concentration is probably justified because oral language development appears to undergird the development of skills in listening, reading, and writing.

Research evidence seems to suggest a high degree of interrelatedness among the four language arts--speaking, listening, reading, and writing. A child's awareness of structural patterns appears to be a basic component in each of the four communication arts.

More research in written composition is needed if teachers are to utilize fully the learning-transfer-potential in the language skills of the four phases of the language arts. For example, such research might enable teachers to recognize those elements of the writing act which are directly related to the other three communication arts and those which are not; this knowledge might then lead to a more meaningful organization of language experiences to insure that elements common to all four phases become less obscure than they now are. This could prove to be very helpful to the child as he attempts to synthesize the learnings in each of the communication fields. Both teacher and learner could benefit from the economy of time and effort. The research most needed, it would seem, is that which seeks to uncover what is currently referred to as "fundamental structure."

Each year research in written composition is reviewed in Elementary English. For the year 1965, only three studies in written composition were found,[1] and for 1966, only two studies were reviewed.[2] The preceding statement tends to support the contention of this investigator that more research in written composition is needed.

I. THE PROBLEM

Statement of the Problem

This investigation was designed to obtain at least partial answers to the following questions:

1. How does the written syntax of children in grades three and six compare with the written syntax of adults, i.e.,adult professional writers?
2. Does the rate of growth in terms of certain syntactic skills vary significantly among groups of children who are enrolled in different language arts programs?
3. Do those children who initially show evidence of advanced syntactic skills also surpass their peers in rate of progress?
4. Does the syntax of the writing of girls differ from that of boys?

Each of the four parts of Chapter V presents the findings related to one of the four questions.

The syntactic patterns used by third- and sixth-grade children in their written compositions were analyzed in this study. The central concern was one of growth or gain in terms of syntactic performance. The compositions were written by 180 children who were participating in three different language arts programs, identified as Programs A, B, and C. Program A was an intensive-treatment program in respect to the teaching of units which appear in *A Curriculum for English*.[3] In Program B, referred to as a moderate-treatment program, units from *A Curriculum for English* were used also, but in this case, they were used in classroom situations which were not highly-controlled as in Program A. In Program C, the control program, the above-mentioned units were not included in the language arts curriculum.

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[1] Walter T. Petty and Paul C. Burns, "A Summary of Investigations Relating to the English Language Arts in Elementary Education: 1965," Elementary English, XLIII (March, 1966), p. 275.

[2] Walter T. Petty and Paul C. Burns, "A Summary of Investigations Relating to the English Language Arts in Elementary Education: 1966," Elementary English, XLIV (April, 1967), p. 399.

Origin of the Study

The present investigation came into existence because there is a need to know much more about how children learn to write. Although there have been several good recent studies of children's oral language, especially Strickland's *The Language of Elementary School Children: Its Relationship to the Language of Reading Textbooks and the Quality of Reading of Selected Children*[4] and Loban's *The Language of Elementary School Children*,[5] there have been few significant studies of the written language of children.

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[3] *A Curriculum for English*, prepared by The Nebraska Curriculum Development Center (Lincoln, Nebraska: University of Nebraska Press, 1965).

[4] Ruth G. Strickland, *The Language of Elementary School Children: Its Relationship to the Language of Reading Textbooks and the Quality of Reading of Selected Children*, Bulletin of the School of Education, Indiana University (Bloomington: Indiana University, 1962).

[5] Walter D. Loban, *The Language of Elementary School Children* (Champaign, Illinois: National Council of Teachers of English, 1963).

Importance of the Study

This study is part of a larger investigation known as the "Nebraska Study of Children's Writing"[6] which was designed to reveal pertinent information concerning the syntactic structures that children use in their writing. In discussing the importance of structure, Bruner has stated, " . . . the curriculum of a subject should be determined by the most fundamental understanding that can be achieved of the underlying principles that give structure to that subject."[7] Bruner also said, " . . . much too little is known about how to teach fundamental structure effectively or how to provide learning conditions that foster it."[8]

In an article in Elementary English, Ruddell recommended that "language educators conduct carefully controlled research carried out in an experimental setting." He further suggested that such studies

> . . . be effected with groups of children taught by distinct and contrastingly different programs with provision for control of important variables, such as intelligence and socio-economic background.[9]

In this study every effort was made to control a number of variables: the groups were matched in terms of socio-economic background, intelligence, sex, and grade level; all test situations were conducted by the same persons; time specifications were strictly adhered to—the amount of time for writing was held constant as was the time of day reserved for the writing sessions; identical prewriting stimulation was provided through the use of a film; predetermined instructions for the children were given in each writing session; and an instrument with clearly-defined categories was used to analyze the compositions. In addition, sentences written by professional writers were used as a basis for comparing the syntax of children's writing with the syntax of acceptable adult prose.

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[6] "Nebraska Study of the Syntax of Children's Writing" (unpublished report of a research project conducted under the aegis of the Nebraska Curriculum Development Center and funded by the Hill Family Foundation, The University of Nebraska, 1967). (Mimeographed.)

[7] Jerome Bruner, The Process of Education (Cambridge, Massachusetts: Harvard University Press, 1960), p. 31.

[8] Ibid., p. 12.

[9] Robert B. Ruddell, "Oral Language and the Development of Other Language Skills," Elementary English, XLIII (May, 1966), p. 497.

This investigation was based on the premise that the testing of new hypotheses, techniques, and curriculum materials may provide additional insight which may lead to an improvement in the teaching of composition.

Theory Basic to the Study

Linguists tell us that the structural arrangement of words into thought units or syntactic units is as important as the words themselves; in fact, some linguists contend that the structural arrangement is far more important than vocabulary. The element of structure, the interrelationship of parts as dominated by the characteristics of the whole, is central in both the sentence and in larger units of discourse. In both speaking and writing, the perception of these structural relationships plays an important role in the child's ability to use language effectively.

Hypotheses

The major hypothesis of this study was as follows: There is no significant difference in the rate of syntactic growth of children in Programs A, B, and C. A second hypothesis was also tested: There is no significant difference between the syntax of girls and boys.

Basic Assumptions

Basic assumptions underlying this study were: (1) that the sentences from professional writing chosen to represent mature written syntax do actually represent the syntax used in well-written adult prose; (2) that it is desirable for the writing of elementary children to evidence a progression toward the professional writer's level; (3) that the compositions written by the groups of children in October and again in February were representative of current syntactic achievement at that time, and (4) that the intelligence tests and the instrument of syntactic analysis measure what they purport to measure and that the various scores can be compared.

Scope and Delimitations

The Lincoln and Omaha, Nebraska, schools which were used in this study may or may not be representative of schools in the Midwest or of the United States as a whole. The schools were selected because of their accessibility and because of the types of language arts programs being offered. The schools in Omaha were included to provide control groups because the Lincoln Public Schools recently incorporated the Nebraska English Curriculum as part of the basic language arts curriculum. It was therefore assumed that the Nebraska English Curriculum would probably be used to some extent in all Lincoln elementary schools in 1966-67.

The schools involved in this investigation are in middle-class socio-economic communities; therefore, the results cannot be generalized to the lower- and upper-class socio-economic segments of our society.

Only the syntax of writing was compared in this study; therefore, the reader is cautioned to view the results, not as a complete description of the writing of children, but as a description of the syntactic aspects alone. This focus certainly does not negate the importance of the substantive aspects of writing; organization of ideas and content is, indeed, of great importance. However, this study was intentionally designed to exclude the substantive aspects and to focus directly on the syntactic aspects of writing.

Limitations of the Study

It was believed that enough teachers were involved in Program B and Program C that unobserved and uncontrolled factors would cancel out each other. Program A was taught by the investigators, Nell Thompson and Donald Nemanich; both have had training in literature, linguistics, and rhetoric. It was not possible to obtain additional teachers with educational backgrounds similar to those of the investigators, therefore a similar canceling-out effect cannot be expected in terms of the teacher variable in Program A. If funds had been available to employ additional language arts specialists to teach additional classes, the personality factor of the Program A teachers might also have been canceled out. The investigators were fully aware that, because of this, the results obtained in Program A cannot with validity be generalized to the same extent that the results of Programs B and C can be generalized.

II. DEFINITION OF TERMS

Corpus. The corpus is the collection of written compositions analyzed in this study.

Post-treatment performance. This term refers to the syntax of the compositions which were written in February.

Pre-treatment performance. A term similar to the one above except that it refers to the syntax of the compositions which were written in October.

Syntax. Syntax is a term used to refer to the way in which words are put together to form various patterns or units.

Syntactic items. See Appendix E for a separate glossary of the terminology used in the syntactic analysis.

Traditional language arts program. This program is one which relies heavily on textbooks that are based on traditional grammar.

Treatment. A term used to denote participation in any one of the three language arts programs identified as Programs A, B, and C.

CHAPTER II

REVIEW OF THE LITERATURE

A review of the literature was conducted to answer these questions:

1. What do we presently know about the child's acquisition of the skills of language?
2. What do we know about teaching the skills involved in the process of achieving syntactic maturity?

I. LANGUAGE DEVELOPMENT

In Language in the Crib, Weir traced the language development of her own child and many of her findings seem to apply to most children: by the age of one year the child uses single-word utterances which increase at a rapid rate; and by the age of two, the child has mastered the concepts of subject-predicate structure and lexical substitution which permit him to increase his language facility at a phenomenal rate in the next few years.[1] Ervin and Miller maintain that most of the basic grammatical fundamentals have been mastered by the fourth year,[2] and, according to Strickland, when the child enters school he has already achieved a high degree of sophistication in his oral language development.[3]

In a study reported by Strang and Hocker, the oral language of the first-grade children was investigated in a variety of situations. Five basic sentence patterns were found in 2,500 recorded samples of oral language, with the simple patterns, such as N-V-N (subject-verb-object), used very frequently. It was concluded by the two investigators that the situation affects sentence length and that children possess wide ranges of manipulative ability in their oral language.[4]

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[1] Ruth Weir, Language in the Crib (The Hague: Mouton and Company, 1962), pp. 1-216.

[2] Susan M. Ervin and Wick R. Miller, Language Development, The Sixty-Second Yearbook of the National Society for the Study of Education, Part I (Chicago: University of Chicago Press, 1963), pp. 108-43.

[3] Ruth G. Strickland, The Language of Elementary School Children: Its Relationship to the Language of Reading Textbooks and the Quality of Reading of Selected Children, Bulletin of the School of Education, Indiana University (Bloomington: Indiana University, 1962), p. 1.

In an investigation of third-grade children's compositions, Johnson found that children tend toward consistency in quartile rank in terms of the number of sentences in narrative, descriptive, and explanatory writing; that is, the child who writes the most sentences in a narrative also surpasses his peers in the number of sentences used in descriptive and explanatory writing. She found that children's narrative compositions were longer than their descriptive or explanatory compositions and that little relationship existed between the number of sentences written and sentence length.[5]

McCarthy, in an early study of language development in children, found that as children mature they produce more words on a given subject; they produce longer sentences; and they use more subordinate clauses.[6] The findings of a study by LaBrant in 1933 also revealed a correlation between a child's age and the use of subordinate clauses.[7]

In a recent study, Hunt substantiated McCarthy's and LaBrant's findings in part; he found that eighth and twelfth-grade students used more subordinate clauses than fourth graders. But Hunt also found that the addition of subordinate clauses was only one way of increasing T-unit (independent clause) length. He discovered that older students used more transformations within the subordinate clause itself, thereby expanding the length of each clause. Hunt found that the T-unit is lengthened as children grow older, principally by absorbing other T-units which have been transformed into subordinate clauses or non-clauses. He concluded that the "growth buds" of language power in children is "the ability to combine sentences by transforming some of the structures."[8] The process of lengthening clauses is described by generative-transformational grammarians as one of using transformations to embed one structure within another. Hunt contended that clause length is a better index of language maturity than sentence length or number of subordinate clauses.[9] Vigotsky suggested that, in addition to clause length, the use of a compound predicate with a single subject may denote a kind of language sophistication in that it may indicate an ability to state causes or relationships in competent linguistic terms.[10]

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[4] Ruth Strang and Mary E. Hocker, "First-Grade Children's Language Patterns," Elementary English, XLII (January, 1965), pp. 38-41.

[5] Lois V. Johnson, "Children's Writing in Three Forms of Composition," Elementary English, XLIV (March, 1967), pp. 265-69.

[6] Dorothea McCarthy, "Language Development in Children," Manual of Child Psychology, Second edition, ed. Leonard Carmichal (New York: John Wiley and Sons, Inc., 1964), pp. 492-630.

[7] Lou LaBrant, "A Study of Certain Language Developments of Children in Grades 4-12 Inclusive," Genetic Psychology Monographs 14:4 (1933), pp. 387-94.

In a detailed study of selected language variables in the speech and writing of 320 children, Harrell, too, found that the length of clauses increased with age and that more subordinate clauses were used by older children in both oral and written composition. More subordinate clauses were found in writing than in speaking; more noun clauses were used in speaking, whereas more adverb and adjective clauses were used in writing. When adverbial clauses of time and cause were excluded, it was found that a larger percentage of adverbial clauses appeared in speech than in writing. The increase in the development of each language variable in relation to age was greater in writing than in speech.[11]

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[8] Kellogg W. Hunt, Differences in Grammatical Structures Written At Three Grade Levels, Report on Cooperative Research Project 1998, United States Office of Education, (1964), pp. 1-152.

[9] Kellogg W. Hunt, "A Synopsis of Clause-to-Sentence Factors," English Journal, LIV (April, 1965), p. 309.

[10] L. S. Vigotsky, "Thought and Speech," Psycholinguistics: A Book of Readings ed. Sol Saporta (1961), pp. 509-37.

The findings of Strickland[12] and Templin[13] indicate that grammatical complexity is related to socio-economic level. In reporting a study of the speech patterns of British youth, Bernstein stressed the same fact. Children of the middle-working-class were able to use greater variation in their speech patterns than were lower-working-class children, apparently because they were able to better utilize the available possibilities of sentence organization. Lower-working-class children were found to have limited use of organizational possibilities of sentence construction.[14]

In his study of the language of elementary school children, Loban found that positive relationships exist among the four language arts—listening, speaking, reading, and writing. His findings also indicate that writing ability is related to socio-economic position. Loban found that children who were advanced in general language ability were also advanced in reading and those who were low in general language ability were also low in reading. The differences found between high and low groups increased from year to year, thereby widening the gap between the groups. Loban's longitudinal study also revealed that children who were rated above average in writing were also above average in their use of oral language and that those who were below average in written language were also below average in oral language. He concluded that intelligence is an important factor and that competence in spoken language appears to be a prerequisite for competence in reading.[15]

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[11] Lester E. Harrell, Jr., "An Inter-Comparison of the Quality and Rate of the Development of Oral and Written Language in Children," Monographs of the Society for Research in Child Development, XXII, No. 3 (1957), p. 247.

[12] Strickland, op. cit., p. 92.

[13] Mildred C. Templin, Certain Language Skills in Children: Their Development and Interrelationships (Minneapolis: University of Minnesota Press, 1957), pp. 172-78.

[14] Basil Bernstein, "Language and Social Class," British Journal of Sociology, XI (1960), pp. 271-6.

Strickland's study suggests a close relationship between a child's ability to use subordination and movables in oral expression and his comprehension of written language.[16] Winter's investigation of the language of first- and second-grade children appears to substantiate Loban's and Strickland's findings about the relationship that exists between oral and written language.[17]

Research seems to indicate that an understanding of sentence structure is basic to the development of skills in reading comprehension. Ruddell reported a correlation of .68 between first-grade children's syntactical language development and vocabulary achievement and a correlation of .44 between syntactical development and reading comprehension.[18] Gibbons found a correlation of .89 between third-grade children's ability to see the relationship between parts of a sentence and their ability to understand a sentence.[19] The conclusions of an early study of paragraph reading by Thorndike also emphasized the importance of the correlation between the child's ability to see relationships among structural elements, such as the various forms of subordination and movables, and his ability to comprehend in reading.[20] Interestingly, a half-century later, Strickland,[21] Loban,[22] and other studies emphasize a similar finding. Apparently, the child who demonstrates facility in the use of subordinates and movables in oral language can better comprehend the written language than can the child lacking this ability.

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[15] Walter D. Loban, The Language of Elementary School Children (Champaign, Illinois: National Council of Teachers of English, 1963), pp. 82-87.

[16] Ruth G. Strickland, The Language of Elementary School Children: Its Relationship to the Language of Reading Textbooks and the Quality of Reading of Selected Children, Bulletin of the School of Education, Indiana University (Bloomington: Indiana University, 1962), p. 105.

[17] Clotilda Winter, "Interrelationships Among Language Variables in Children of the First and Second Grades," Elementary English, XXXIV (February, 1967), pp. 108-13.

[18] Robert B. Ruddell, "The Effect of the Similarity of Oral and Written Patterns of Language Structures on Reading Comprehension," Elementary English, XLII (April, 1965), pp. 403-410.

[19] Helen D. Gibbons, "Reading and Sentence Elements," Elementary English Review, XVIII (February, 1941), pp. 42-46.

In a study of the oral and written language of tenth-grade students which was conducted several years ago, Bushnell found higher scores on measures of sentence structure in written composition than in oral composition. He concluded that the most important difference between students' oral and written expression was the more precise organization of both sentence structure and content in their written compositions.[23]

Hunt analyzed 1,000-word samples of writing by eighteen "superior" adults (writers who had published expository articles in Harper's and Atlantic) and compared an analysis of their writing to his previous analysis of children's writing. He found that the average sentence length of the adults' sentences was 47 percent above that of twelfth-grade students. Hunt concluded, however, that clause length, more than any other single factor, distinguishes between the writing of adults and students.[24]

In a recent article Hunt stated, "Little by little the evidence piles up that the reduction and consolidation of many clauses into one is intimately related to syntactic growth both in reading and writing."[25] Hunt further contended that if writers build up clauses, then readers must break them down. He suggested that "a whole new range of application is opened up for approaching reading difficulty."[26] Earlier studies and recent ones appear to have reached similar conclusions concerning the following:

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[20] E. L. Thorndike, "Reading and Reasoning, A Study of Mistakes in Paragraph Reading," Journal of Educational Psychology, VIII (June,1917), pp. 323-32.

[21] Strickland, op. cit., p. 105.

[22] Loban, loc. cit.

[23] Paul Bushnell, An Analytical Contrast of Oral with Written English, Contributions to Education No. 451 (New York: Teachers College, Columbia University, 1930), pp. 65-67.

[24] Kellogg W. Hunt, "A Synopsis of Clause-to-Sentence Length Factors," English Journal, LIV (April,1965), pp. 300-309.

1. Development of the skills of language is closely related to age, intelligence, and socio-economic factors.
2. The skills of listening, speaking, reading, and writing are interrelated.

II. THE LANGUAGE CURRICULUM

At the present time there appears to be a great deal of interest in new language arts programs for the elementary school. One of the programs receiving the attention of educators is *A Curriculum for English*[27] which was developed by the Nebraska Curriculum Development Center, University of Nebraska.

The elementary units of *A Curriculum for English* place a heavy emphasis on the teacher's oral reading of literature to pupils. This feature of the program is based on the premise that frequent opportunities to hear language used at its best (literature) may exert a positive influence on the child's acquisition of language skills. In a sense, then, the elementary program is a "listening" program rather than a "reading" program. Literature, language, and composition suggestions are included in each of the elementary units.

In an investigation concerning the relationship of listening and reading,

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[25] Kellogg W. Hunt, "Recent Measures in Syntactic Development," *Elementary English*, XLIII (November,1966), p. 739.

[26] *Ibid*.

[27] *A Curriculum for English*, prepared by the Nebraska Curriculum Development Center (Lincoln, Nebraska: University of Nebraska Press, 1965).

Young found that intermediate grade children retained more from an oral presentation by the teacher than from silent reading by themselves.[28] The findings of Young's study would appear to support the Nebraska program's recommendation that emphasis be given to the oral presentation of literature by the teacher. A point emphasized by Young is that much more research is needed in that part of the language arts curriculum having to do with listening skills.[29] According to Russell, a theory of listening is needed which would enable researchers to generate hypotheses to be tested.[30]

Ruddell has suggested that reading literature to children can help them understand how intonation is used to convey meaning in oral expression and how punctuation is used for a similar purpose in written expression. In addition, children can learn through literature how an author expands certain parts of sentences in order to provide more precise information in an interesting way.[31] Strang and Hocker have emphasized that children need literature at each stage of their development in order to "get a feeling for language." Otherwise, the two writers believe, children may never outgrow "their own primitive expression."[32] Brett has also suggested the use of literature as a model for writing. Contending that much more information is needed about how writing skills are learned, she asks:

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[28] William E. Young, "The Relation of Reading Comprehension and Retention to Hearing Comprehension and Retention," Journal of Experimental Education, V (September, 1936), pp. 30-39.

[29] Ibid.

[30] David H. Russell, "A Conspectus of Recent Research on Listening Abilities," Elementary English, XLI (March, 1964), pp. 262-67.

[31] Robert B. Ruddell, "Oral Language and the Development of Other Language Skills," Elementary English, XLIII (May, 1966), pp. 489-98.

[32] Ruth Strang and Mary Elsa Hocker, "First Grade Children's Language Patterns," Elementary English, XLII (January, 1965), p. 41.

> Are there factors conditioning one's ability to write which we have not taken sufficiently into account? For instance, is it possible that extensive experience with superior writing of others, and perhaps even a touch of talent, are essentials for which no amount of writing practice and teacher evaluation can substitute?[33]

The elementary units of A Curriculum for English are designed to provide an "extensive experience with superior writings of others." It may be that teachers using the units will supply the answer to the second of the questions posed by Brett.

Various recent grammars are now receiving attention; the literature in the field of language abounds with claims (most of which seem to be unsubstantiated and unwarranted at this time) that one or another of the "new" grammars is best. In commenting about the various grammars that exist, Griffith suggested that we may need more than one model to represent the phenomenon of language just as the physicist needs both the wave theory and the quantum theory to explain the phenomenon of light.[34]

Educators are in a quandary about the role that grammar should play in the elementary school. Hunt has recommended the implementation of a "sentence building program." In such a program the student could be "exercised in the process of combining kernel sentences into more complicated sentences. He could also be given complicated sentences to break down into kernel sentences."[35] Hunt advocates experimentation with such a program even though the results might show that attempts to "force growth" do not succeed, that physiological and experiential maturation are the crucial elements.[36]

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[33] "Project English Notes," edited by Sue M. Brett, United States Office of Education Research Findings, The English Journal, LIII (September, 1964), p. 466.

[34] Albert J. Griffith, "Linguistics: A Revolution in Retrospect," Elementary English, XLIII (May, 1966), p. 508.

[35] Kellogg W. Hunt, "A Synopsis of Clause-to-Sentence Factors," English Journal, LIV (April, 1965), p. 309.

[36] Ibid.

Newsome believes that the chief contribution which grammar can make to composition lies in the province of style, the choice of words and the way they are put together. She postulates that "if students are to develop greater flexibility and maturity in their writing they need experience of various kinds in manipulating a wide range of structures." She cites several examples of expansions and transformations to illustrate practices which she recommends. She also mentions two dangers to be avoided when students are expanding and transforming sentences: (1) cluttering sentences with modifiers, and (2) creating synthetic, artificial sentences.[37] Borgh, too, believes that "a child who can intuitively or emulatively write complex structures at the age of seven or eight should certainly be exposed to the study of syntactic structures at the elementary level."[38] She further contends that the neglect of syntax is evident in our literary criticism as well as in our teaching. She quotes from Warfel who stated in Language, A Science of Human Behavior:

> There has been bred in us an excessive adoration of words and ignorance of or distaste for the systematic organization of words into syntax.[39]

Warfel pointed out Jesperson's analysis of Shakespeare's poetry and commented that the few references made to the master's grammar and syntax were "unperceptive." According to Borgh, teachers today tend to repeat Jesperson's error in that they concentrate on lexical matters and merely assume that syntax will "take care of itself."[40] Lefcourt[41] and Lefevre[42] support the position taken by Borgh: that the teacher should help students bring from the intuitive level to the conscious level the patterns of snytax inherent in the English language.

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[37] Verna L. Newsome, "Expansion and Transformations to Improve Sentences," The English Journal, LIII (May, 1964), pp. 327-35.

[38] Enola M. Borgh, "The Case for Syntax," Elementary English, XLII (January, 1965), pp. 28-34.

[39] Henry Warfel, Language, A Science of Human Behavior (Cleveland: H. Allen, 1962), p. 14.

A study by Blake and Hammill suggests some possible advantages of structural linguistics over traditional instruction in teaching children how to build the various sentence patterns. However, they caution the reader to view their research as suggestive rather than conclusive because the study dealt with only a few of the variables that are important in assessing writing.[43]

In a summary of language arts investigations, Blount reviewed a study by Klauser which was designed to compare the effects of structural and traditional grammar in the seventh, eighth, and ninth grades. Klauser found that the students in grades seven and nine who studied structural grammar made significant gains in understanding effective writing, whereas no significant difference was noted in the performance of the classes at grade eight.[44]

In summarizing the Hunt study of children's language, Brett concluded her critique by posing several questions which might be asked by teachers as they review the findings of Hunt:

> That fourth graders have command of the basic syntactic structures is interesting to know. But does this finding suggest curriculum change? Does it imply that fourth grade is the proper time to begin language analysis? Three-year-olds use noun clauses--

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[40] _Ibid._

[41] Ann Lefcourt, "Linguistics and Elementary School Textbooks," _Elementary English_, XL (October, 1963), pp. 598-601.

[42] Carl A. Lefevre, _Linguistics and the Teaching of Reading_, (McGraw-Hill, Inc., 1964), p. 23.

[43] Howard A. Blake and Donald D. Hammill, "Structural Linguistics and Children's Writing," _Elementary English_, XLIV (March, 1967), p. 278.

[44] Nathan S. Blount, "Summary of Investigators Relating to the English Language Arts in Secondary Education: 1965," _English Journal_, LV (May, 1966), p. 596.

> "Mother said I could go"; but no one recommends teaching three-year-olds to recognize noun clauses. Does not language analysis require abilities different from those needed in everyday communication? Or is readiness for language analysis simply a matter of motivation?[45]

Burrows has also questioned the use of analytical techniques in the study of language in the elementary school. She cautioned those who would blindly adopt such practices with this admonition: "Values of conscious linguistic analysis will indeed have to be proved; they cannot be assumed."[46]

Previous reference has been made to the Loban study which is an extensive longitudinal study of children's language. Loban believes that teachers need to be aware of structural problems, but that children need language experiences other than the memorization and application of rules.[47]

After reviewing two investigations on the correlation between awareness of grammatical structure and writing ability, O'Donnell reached the following conclusion: Knowledge of grammar is not highly correlated with ability to write. He doubts that mastery of either structural or traditional grammar will automatically insure proficiency in students' writing.[48]

In reviewing a study of children's writing which was conducted in England by Harris[49] in 1962, Braddock et al. reported that Harris' findings indicated that the study of English grammatical terminology had a "negligible or even a relatively harmful effect upon the correctness of the children's writing." Braddock cautioned that the Harris study was based on the use of traditional grammar and as such, does not necessarily prove the ineffectiveness of instruction based on structural or generative grammar.[50]

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[45] Sue M. Brett, "A New Measure of Language Maturity," Elementary English XLII (October, 1965), p. 668.

[46] Alvina T. Burrows, "Research Critiques," ed. by Patrick Graff, Elementary English, XLI (May, 1964), p. 535.

[47] Walter D. Loban, The Language of Elementary School Children (Champaign, Illinois: National Council of Teachers of English, 1963), p. 88.

[48] Roy O'Donnell, "Reading, Writing, and Grammar," Education, LXXXIV (May, 1964), pp. 533-36.

[49] Roland J. Harris, "An Experimental Inquiry Into the Functions and Value of Formal Grammar in the Teaching of English, with Special Reference to the Teaching of Correct Written English to Children Aged Twelve to Fourteen," (unpublished doctoral dissertation, University of London, 1962).

Major attention was directed toward the use of sentence patterns in 1952 with the publication of Fries' The Structure of English.[51] Since that time various pedagogical works have been published which focus attention on sentence patterns as a means of determining how sentences are derived. Among the earliest of such works are Roberts' English Sentences for students in the secondary school,[52] and the textbooks by Postman and his associates for the junior high level.[53] Agreement has not been reached on the number of basic patterns or whether such patterns constitute workable units. Postman identifies four patterns as basic,[54] Conlin designates seven, and Roberts enumerates ten.[55]

In a review of Gleason's Linguistics and English Grammar,[56] Higgins predicted that teachers will find clause patterns to be of more value than sentence patterns.[57] Loban also concluded that sentence patterns are not so important as a measure of effectiveness and control as what writers do to achieve flexibility within the basic patterns.[58]

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[50] Richard Braddock, Richard Lloyd-Jones, and Lowell Schoer, Research in Written Composition (Champaign, Illinois: National Council of Teachers of English, 1963), p. 83.

[51] Charles C. Fries, The Structure of English (New York: Harcourt, Brace and Company, 1952).

[52] Paul Roberts, English Sentences (New York: Harcourt, Brace, and World, 1962).

[53] Neil Postman, The Uses of Language (New York: Holt, Rinehart and Winston, Inc., 1965).

[54] Ibid.

[55] David A. Conlin, Modern Grammar and Composition (New York: American Book Company, 1965).

[56] H. A. Gleason, Linguistics and English Grammar (New York: Holt, Rinehart, and Winston, Inc., 1965).

Strickland found the sentence patterns used in the writing of elementary textbooks to be over-simple in that they lack a variety of elements that children use in speech. She reported that a single basic pattern was practically the only pattern used in the textbooks examined, and that when other patterns were used, they were not introduced in any systematic way.[59] Strickland, Lefevre[60] and Thomas[61] seem to agree that writers of elementary textbooks overuse certain patterns to the extent that they neglect other patterns.

Concerning the current debate between structural linguists and grammarians of the traditional sort, Gleason contends that the issue "should at least be rephrased."[62] He believes that what is needed is a new effort on the part of teachers to understand the basic principles of language and language description.[63]

Griffin has also stressed the importance of the teacher's knowledge of language. He stated:

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[57] Louise Higgins, "Professional Publications," ed. by Margaret Early, English Journal, LV (April, 1966), pp. 486-7.

[58] Walter D. Loban, The Language of Elementary School Children (Champaign, Illinois: National Council of Teachers of English, 1963), p. 88.

[59] Ruth G. Strickland, The Language of Elementary School Children: Its Relationship to the Language of Reading Textbooks and the Quality of Reading of Selected Children, Bulletin of the School of Education, Indiana University (Bloomington: Indiana University, 1962), p. 104.

[60] Carl A. Lefevre, Linguistics and the Teaching of Reading, (McGraw-Hill, Inc., 1964), p. 37.

[61] Owen Thomas, Transformational Grammar and the Teacher of English (New York: Holt, Rinehart and Winston, Inc., 1965), pp. 213-19.

[62] Gleason, op. cit., p. 27.

[63] Ibid.

> Teachers do not so much need this linguistic knowledge because they must impart it to others (though they may and should do this to a degree even at the lowest levels), but because they must teach skills (reading, composition, explication) which depend on language. To read, write, and interpret well themselves, teachers, like their students, may get by with intuitive linguistic knowledge, but to teach others these three skills they may have to understand in a more conscious way the processes of language. Thus one may keep himself fairly healthy without any knowledge of anatomy, physiology, hygiene, or medicine; to be a professional healer of others, however, one may find these sciences indispensable.[64]

In a recent article Petty and Burns[65] summarized an investigation which was conducted by Prentice in which she compared the effects of syntax study and semantics study in word learning on subsequent use of new words. The subjects, fourth-grade children, demonstrated the acquisition of syntax by completing sentences in a grammatical use test. Prentice concluded that grammatical use is more effective than semantics as a method of acquiring syntactic meaning and that referential association is more effective than syntax as a method of acquiring semantic meaning.[66]

Squire believes that some of our former notions need to be abandoned because they are not valid—for example, the notion that the sentence should be studied in the elementary school, the paragraph in junior high school, and the longer discourse in high school. He suggests that sequence in composition be based on "psychological rather than logical patterns of organization." A child's intellectual, physical, emotional, and social development affects his learning;

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[64] Albert J. Griffith, "Linguistics: A Revolution in Retrospect," Elementary English, XLIII (May, 1966), p. 508.

[65] Walter T. Petty and Paul C. Burns, "A Summary of Investigation Relating to the English Language Arts in Elementary Education: 1966," Elementary English, XLIV (April, 1967), pp. 392-401.

[66] Joan L. Prentice, "Semantics and Syntax in Word Learning," Journal of Verbal Learning and Verbal Behavior, V (June, 1966), pp. 279-84.

therefore, according to Squire, sequence in composition should be based on what is known about the developmental characteristics of children.[67]

One of the problems investigators face in conducting studies of written composition has to do with the number of compositions needed from each subject participating in the study. Kincaid believes that an evaluation of overall group improvement resulting from a writing course may be obtained from a single pretest composition and a single post-test composition. He recommends, however, that several samples of writing be collected if the evaluation is intended to accurately assess individual progress. Kincaid bases his recommendation on the findings of his study of the writing of college students.[68]

A review of the literature substantiates the claim that little is actually known about the process of writing, and therefore, very little is known about how to teach it. The composing process is a complex intellectual activity influenced by many variables. Investigations of the teaching of written composition have often been lacking in rigor. Only five of over a thousand studies of written composition which were studied recently by a committee of the National Council of Teachers of English ("Committee on the State of Knowledge about Composition") were rated "distinctly superior" in terms of research design.[69] Consequently, the committee formulated some guidelines for the planning of future research. Because of the work of this committee, it may be that present and future composition research will be improved.

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[67] James R. Squire, "Five Rules for Sequence," National Education Association Journal, LIII (November, 1964), pp. 14-16.

[68] Gerald L. Kincaid, "Some Factors Affecting Variation in the Quality of Student Writing" (unpublished doctoral dissertation, Michigan State College, Michigan State University, 1953), University Microfilm No. 5922, p. 116.

[69] Richard Braddock, Richard Lloyd-Jones, and Lowell Schoer, Research in Written Composition (Champaign, Illinois: National Council of Teachers of English, 1963), pp. 5-29.

CHAPTER III

PROCEDURES

Chapter III is devoted to an explanation of the various procedures that were followed in this study in regard to: the selection of schools; the selection of subjects; the tests and instruments used; the writing situation; and the selection of the professional writers' sample. The procedures involved in the analysis of the corpus seemed to warrant a separate chapter; therefore, additional procedural steps are presented in Chapter IV.

In this investigation 360 compositions were analyzed which had been written by 180 children who were participating in three different language arts programs.

Program A (Experimental I)

> Indicates an intensive-treatment program with respect to the use made of the materials created by the Nebraska Curriculum Development Center; A Curriculum for English[1] provided the basis of this program. Additional materials prepared by the investigators were used to supplement the basic curriculum. (See Appendix L.) This program was taught by the two investigators working together as a teacher-team.

Program B (Experimental II)

> Indicates a moderate-treatment program with respect to the curriculum identified in A. Teachers were free to use A Curriculum for English to whatever extent they wished and to supplement the program with materials of their own choosing. This program was taught by the regular classroom teachers.

Program C (Control)

> Indicates a control program in which the materials identified in A were not used at all. A commercially-prepared textbook served as the basis of the language arts curriculum and teachers were free to

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[1] A Curriculum for English, prepared by The Nebraska Curriculum Development Center (Lincoln, Nebraska: University of Nebraska Press, 1965).

use any supplementary materials they wished to use. This program was also taught by the regular classroom teachers. (See Appendix K for a more detailed description of the three programs.)

The reader will note that the Experimental I, Experimental II, and Control aspects of the study have been designated by the letters A, B, and C, respectively. This same abbreviated form was consistently used whether reference was being made to programs, schools, or groups of children.

Selection of Schools

The schools selected for this study represent similar socio-economic communities. (See Appendix A for a list of the schools.) Census reports of 1960 were used to determine school-communities of approximately equal socio-economic status. Table I shows a comparison of income, housing and adult education for the three communities selected.

TABLE I

MEDIAN SOCIO-ECONOMIC INDICES* OF THE THREE COMMUNITIES IN WHICH SCHOOLS A, B, AND C ARE LOCATED

Index	School A	School B	School C
Income	$ 6,143	$ 6,740	$ 7,490
Housing	$11,100	$13,800	$14,800
Education (school years completed by persons 25 years old and older)	12.6	12.7	12.4

*U. S. Bureau of the Census, U. S. Censuses of Population and Housing: 1960. Census Tracts. Final Report PHC(1)-79 (Washington: Government Printing Office, 1961).

According to the census report, a large majority of the homes in each of the three communities are valued at $10,000-19,000. Community B is a somewhat newer housing area than A or C with fewer rental units and fewer houses above $20,000, while C is in closer proximity to an industrial center than A or B. These facts were taken into account in equating the schools, thereby accounting for the slightly higher income and housing values of B and C. The overall socio-economic status of the three communities was thought to be comparable.

Selection of Subjects

One hundred eighty children in grades three and six in Lincoln and Omaha schools were used in this study. Table II shows the distribution of subjects in Groups (Schools) A, B, and C.

TABLE II

DISTRIBUTION OF SUBJECTS IN GROUPS A, B, AND C
BY GRADE LEVEL

Group	Grade 3	Grade 6	Total
Group A (Experimental I)	30	30	60
Group B (Experimental II)	30	30	60
Group C (Control)	30	30	60
Total	90	90	180

The subjects in Groups A, B, and C were equated on a matched-pairs basis according to grade, sex, and total intelligence. Total group and subgroup IQ means and standard deviations are given in Tables III and IV.

The matching of pairs--or to be more accurate, "triplets"--was made possible because approximately five times as many children were available in the selected schools as were needed. The subjects came from a total of 21 classrooms;

consequently, an overall total of 21 teachers were involved in the study. There were 16 girls and 14 boys in each of the third-grade groups, and 13 girls and 17 boys in each sixth-grade group.

TABLE III

IQ MEANS AND STANDARD DEVIATIONS OF GROUPS A, B, AND C AT GRADES 3 AND 6

N = 30 For Each Group

Grade	Group	Range	Mean	Standard Deviation
3	A	82-129	106.20	12.11
	B	84-129	106.13	12.12
	C	77-129	106.36	12.33
6	A	99-136	116.00	9.44
	B	97-135	116.43	9.60
	C	99-135	116.46	9.34

The three groups at grade three show a divergence of only .23 of one point in IQ means and only .22 of one point in standard deviations. At grade six, the spread is .46 of one point in IQ means and .36 of one point in standard deviation. The information presented in Tables III and IV reveals that the groups are comparable, and the information also reflects the close attention which was given to the process of matching groups. A slight overlap in range was unavoidable in a few cases in the process of matching girls with girls, and boys with boys. (See Appendix B for individual IQ scores for the 180 subjects.)

TABLE IV

IQ MEANS AND STANDARD DEVIATIONS OF HIGH, MIDDLE, AND LOW SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

N = 10 For Each Subgroup

Grade	Group		Range	Mean	Standard Deviation
3	High	A	112-129	119.70	5.79
		B	111-129	119.50	6.43
		C	113-129	119.60	5.50
	Middle	A	101-111	105.70	3.94
		B	98-111	105.70	4.33
		C	101-111	105.70	3.93
	Low	A	82-99	93.20	5.73
		B	84-98	93.20	5.12
		C	77-103	93.60	8.19
6	High	A	122-136	127.20	4.31
		B	122-135	127.20	4.21
		C	122-135	127.00	4.19
	Middle	A	114-121	116.30	2.98
		B	114-121	116.20	2.80
		C	113-121	116.10	3.07
	Low	A	99-112	106.30	4.03
		B	97-112	106.10	4.82
		C	99-112	106.30	4.03

Tests and Instruments

The intelligence tests used in this study were the California Short-Form Test of Mental Maturity, the Lorge-Thorndike Intelligence Test, and the Otis Quick-Scoring Mental Ability Test. The scores of the three tests were converted to standard scores because of differences in mean and standard deviation values. The standard scores were then used in matching the pupils in Groups A, B, and C. As a convenience to the reader, the standard scores were then reconverted to the form that is somewhat more familiar, i. e. the mean and standard deviation values of the Lorge-Thorndike Intelligence Test were used in the reconversion process and the scores thus obtained were presented in the preceding tables.

The instrument used for the syntactic analysis is one which was developed in 1964-65 at the University of Nebraska as part of the "Nebraska Study of the Syntax of Children's Writing."[2] More detailed information about the instrument is presented in Chapter IV.

In the analysis of data, percentage ratios and the following statistical tests were used: the Wilcoxon matched-pairs signed-ranks test; analysis of covariance; and the Spearman rank correlation coefficient. The formulas for the statistical tests appear in Appendix G.

In the process of selecting the most appropriate statistical tests, the investigators were given valuable assistance by Donald O. Clifton, Associate Professor of History & Philosophy of Education and Educational Psychology and Measurement, and David Levine, Professor of Psychology, both of the University of Nebraska.

The conclusion was reached that, for the most part, nonparametric statistical tests should be used because of the nature of the data. It was decided, however, that the analysis of covariance parametric test should be used in the case of four of the thirty-six variables under study. It was thought that the data in these four instances appeared to fulfill more closely the basic requirements in the analysis of covariance, i. e. independent observations within sets, equal variance within sets, normal distribution of population values within sets, and the quality of additivity which is needed in the contributions to total variance.

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[2] "Nebraska Study of the Syntax of Children's Writing" (unpublished report of a research project conducted under the aegis of the Nebraska Curriculum Foundation, The University of Nebraska, 1967). (Mimeographed.)

One of the advantages of the analysis of covariance is that it allows one to adjust the means of the experimental variable by regressing the scores in terms of initial performance. This technique also permits the testing of differences among several groups simultaneously. The test could not be used in every case, principally because the condition of homoscedasticity (equal variance) was not satisfied when preliminary tests were made. Because the basic assumptions of the analysis of covariance could not be satisfied in total, the decision was made to use the Wilcoxon matched-pairs signed-ranks test as the major statistical test, one that could be used for all thirty-six variables. However, in an exploratory study of this kind, it was thought to be permissible and desirable to supplement the nonparametric findings with the covariance technique in the analysis of the following variables: total subordinate clauses, total verbal phrases, total adverbials, and total T-units at level four and higher.

The Wilcoxon matched-pairs signed-ranks test was selected because it is one of the most powerful of the non-parametric tests; it utilizes the magnitude of the differences within pairs as well as the direction of differences. Another advantage of the Wilcoxon is that it can be used with both small and relatively large samples. In the present study there were thirty children in each group and ten in each IQ subgroup. The decision to use the Wilcoxon was made prior to the selection of subjects, hence, procedures were used to equate the pairs in terms of socio-economic background and intelligence, the two variables found to be most significant in many research studies.

The difficulty of obtaining "perfect" matches was recognized at the outset: at the present time researchers are limited in their ability to match people because of a lack of knowledge about many of the variables which may be relevant; also, many of the tools currently available for measuring the known variables are lacking in precision.

Despite the limitations of the matched-pairs technique, it was selected as the best statistical test to use. In a sense, the study involved matched-groups, rather than matched-pairs, because individual scores were used only as a means of obtaining group data; this also tends to justify the use of the Wilcoxon test. Perhaps it should be noted that the Wilcoxon permits the testing of differences for only two groups at a time, whereas in the analysis of covariance, several groups can be tested at the same time.

The Writing Situation

The compositions which were analyzed for this study were all written under controlled conditions. In groups of 30, the 180 subjects were shown a film, after which they were asked to write a story. The same procedure was followed for the pre- (October) and post- (February) treatment writing sessions. Films were used as a means of keeping constant for all groups the variable of external motivation during the testing session. All writing sessions were conducted by the investigators and all sessions were held during the morning hours of the school day. The children were told they could write any type of original story they chose to write and that they would be given forty minutes of writing time. (See Appendix D for the instructions for the writing sessions.) The children were given help with the spelling of any words they needed; this procedure was followed so that each child's flow of ideas would not be restricted because of his inability to spell certain words.

Strict adherence to the time factor was considered a crucial point because, in a sense, time served as a "common denominator" and provided the basis for a comparison of performances. In effect, the question asked was: When all subjects are given the same amount of time for writing, how does writing performance differ in terms of the various treatments, intelligence, grade level, and sex? All sentences written by each child during the specified time were included in the analysis.

In the writing situation, no attempt was made to control such factors as the environmental conditions of the various buildings, the physical health of the pupils, or the emotional adjustment of the pupils.

The two films used were:

> "Rainshower," a fifteen-minute color film for primary and intermediate grades that shows the sights and sounds, the beauty and rhythm of rain. (Churchill Films)
>
> "The Vanishing Prairie: Large Animals That Once Roamed the Plains," a twelve-minute color film for primary, intermediate, and junior high pupils that shows animals, such as the pronghorn antelope, big horn sheep, and mountain lion, and how they live on the plains. (Walt Disney)

After the compositions were collected, they were typed lengthwise on eight and one-half by eleven inch sheets of paper with five spaces between lines. These wide spaces between lines permitted detailed analysis of the constituents of each sentence on the sheet containing the composition itself. (See Appendix G for an example of the analysis of one composition.) The frequencies of various syntactic structures were tallied for each composition from each group, for each grade, and also for the professional writers. (See Appendix G for an example of the compilation charts.) It thus became possible to compare the frequency of use and growth in use of desirable syntactic patterns of: (1) children and professionals; (2) the three treatment-groups; (3) the two grades; and (4) boys and girls.

The Professional Writers' Sample

To be of most value, information about children's syntax should indicate not only the progress that children are making in their written syntax, but also the extent to which they approach a desirable standard of written syntax. But, where is such a touchstone to be found?

Obviously, a desirable standard of comparison with which to evaluate the syntax of children should be from twentieth-century America. But who among our writers should be the standard? It would be virtually impossible to get agreement from any large group of readers of contemporary fiction about selecting one writer whose syntax should be the ideal toward which young writers should progress. Thus, it was decided that the sample should represent several writers. The 500 sentence sample selected to be the standard consisted of twenty sentences randomly selected from major works of prose fiction by twenty-five modern American writers. (See Appendix C for list.) The analyst arbitrarily selected the twenty-five writers after discussions with several professors in the Department of English at the University of Nebraska.

The professional writers' sample includes representation of a wide variety of styles. All of the writers have been successful; all are well-known for their prose fiction; some have enjoyed considerable popularity and little critical acclaim; whereas others are considered to be among the best of our modern writers.

In each of the twenty-five selections, the twenty sentences chosen included the first six in each work and two passages of seven each from two randomly-selected pages.

CHAPTER IV

ANALYSIS OF THE CORPUS

During the 1964-65 school year the instrument of analysis for the "Nebraska Study of the Syntax of Children's Writing"[1] was developed by Eldonna Evertts, Dudley Bailey, Albert Marckwardt, Vance Hansen, Don Nemanich, and Paul Olson. The information in this chapter concerns the instrument of analysis and its relevance to the present study.

THE INSTRUMENT OF SYNTACTIC ANALYSIS: DEVELOPMENT AND PHILSOSPHY

The Nebraska Study is concerned with only the written language of children, but at the time the study was begun, it was believed desirable to have an instrument similar in grammatical presupposition and in basic system of notation to that used in the Strickland study[2] of the oral language of children. However, it was felt that, on the basis of the experience of the Strickland study, a somewhat more refined and complex instrument would make possible a more precise analysis of syntax. It was thought, too, that the system had to be simple enough to permit rapid, immediate-inspection analysis of a large number of children's sentences; this prompted reticence to use a transformational schematum. It was also decided that the verb system should be set aside as requiring a later research project. Out of this pragmatic calculus, the instrument of analysis emerged.

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[1] "Nebraska Study of the Syntax of Children's Writing" (unpublished report of a research project conducted under the aegis of the Nebraska Curriculum Development Center and funded by the Hill Family Foundation, the University of Nebraska, 1967). (Mimeographed.)

[2] Ruth G. Strickland, The Language of Elementary School Children: Its Relationship to the Language of Reading Textbooks and the Quality of Reading of Selected Children, Bulletin of the School of Education, Indiana University (Bloomington: Indiana University, 1962).

Although the system is a multi-level one in contrast with Strickland's two-level schematum, the system does parallel Strickland's on the first level. For example, at level one, the noun and verb slots are identified by symbols quite similar to those used in the Strickland study, and other sentence level slots are also identified in fashions similar to those of the Strickland study. In this study, as in Strickland's, the symbols 1 2 4 represent a sentence or clause which has a subject-verb-object pattern. However, deviations from Strickland's design do appear in the level one analysis, especially in the treatment of adverbial slots. In the Strickland study, adverbials are identified by notional criteria; there are, for example, adverbials of place, time, manner, etc. In the present study, adverbials are identified according to position rather than notional type, and, in addition, a distinction is made between those adverbials which are fixed and those which are movable--a classification which contrasts with the Strickland study in which all adverbials are called movable regardless of their degree of movability. (See Appendix E for A Glossary of Terminology Used in the Syntactic Analysis.)

The system for analyzing levels beyond the first level differs more radically from Strickland's; the Strickland instrument of analysis permits only two levels, whereas the instrument used in this study permits as many levels as are needed to describe the structures used. In the Strickland study the constituents of any slots are simply identified as nuclei and satellites, or heads and modifiers; the present system of analysis identifies more precisely the constituents of the slots. This is not to denigrate the Strickland notation, but to admit that the present study benefited from the findings of her study and others. From the experience of other researchers it was learned that a somewhat more complex instrument would reveal more of the subtleties of language used by writers. Mayer found th research scheme of Strickland's level II analysis to be "impossibly underdifferentiating." He contended that the Strickland study obscured what may be important details by lumping together the most complex constructions with the simplest ones.[3]

In the notation system of the present study, the constituents are described as specifically as possible by appropriate grammatical terminology: e.g., the subject of a sentence is not merely identified as a nucleus preceded by satellites, but rather is described as a noun preceded by a determiner, adjective, possessive noun, or attributive noun. When phrases or clauses are inserted within one another, two levels of analysis would appear to be inadequate to describe the resultant complexity.

Consider, for example, the following sentence written by a third-grade child: "It was the head of Aroma, the main character in my story." The sentence consists of a subject, linking verb, and noun complement, and the complement consists of the noun "head" preceded by a determiner, and followed by a prepositional phrase which includes additional modifiers. The constituents of slots are revealed by a second level of analysis. However, the second level of analysis does not reveal the additional constituents that appear within a single constituent. The following representation of the system of analysis used in the present study indicates how complex structures can be described by a multi-level system of analysis. This sentence contains five levels:

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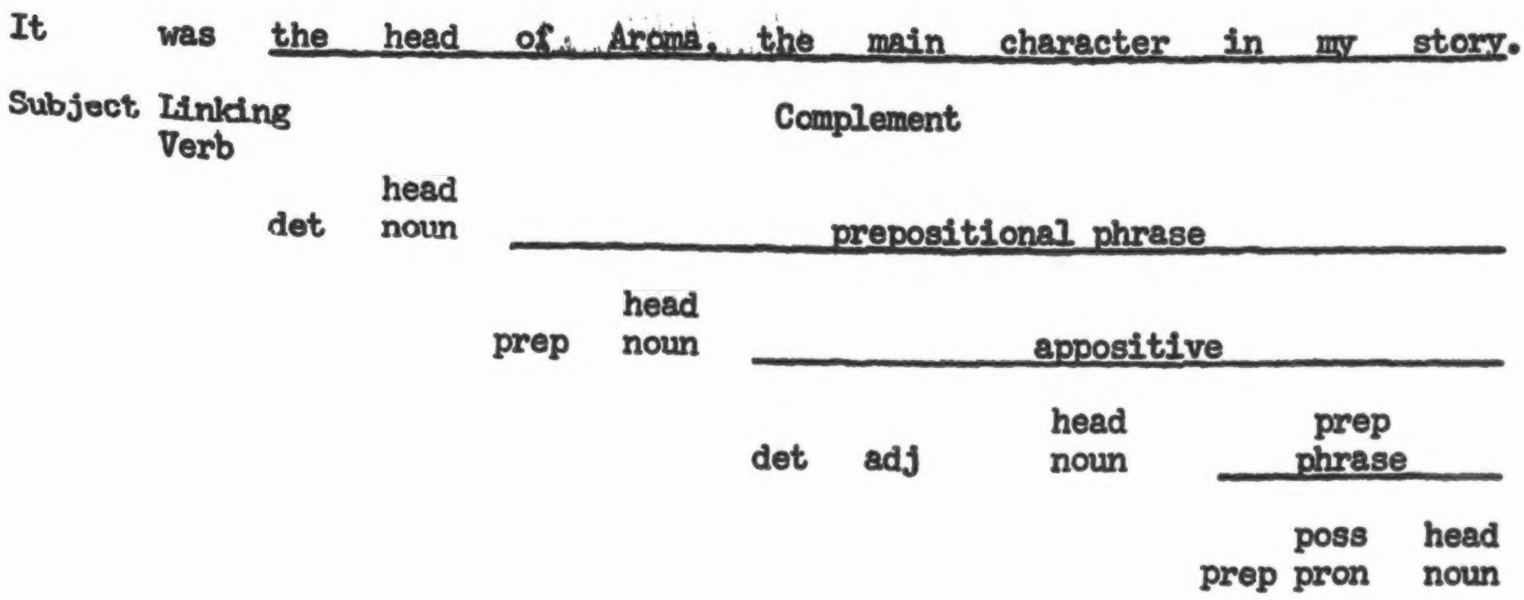
[3] Edgar Mayer, "Research Critiques" (edited by Patrick Groff), Elementary English, XLI (May, 1964), pp. 535-6 + 541.


It was the head of Aroma, the main character in my story.
Subject
Linking Verb
Complement
det
head noun
prepositional phrase
prep
head noun
appositive
det
adj
head noun
prep phrase
prep
poss pron
head noun

The system of analysis used in the Nebraska Study instrument is generally eclectic, and borrows from the work of various modern linguists and their several approaches to syntax--structural, stratificational, tagmemic, and transformational-generative; it does not claim to advance syntactic theory toward a more refined description of linguistic system, but rather claims a certain workability. It is essentially an immediate constituent system of analysis, perhaps most like the system elaborated by Robert Longacre and other tagmemicists.[4] Use has been made of transformational-generative grammar where it seemed most helpful--to show relationships between syntactic structures which are essentially identical in meaning but different in syntax, such as active-passive structures and statement-question structures.

The strongest criticism of non-transformational grammars made by Postal[5] and others has been that these grammars account only for surface structure and cannot explain adequately structures which are similar in form but different in their underlying grammatical structure. For example, Chomsky[6] and others have noted the difference in meaning of the sentences: "John is eager to please" and "John is easy to please"; "John" is the subject of "please" in the first sentence, and the object of "please" in the second.

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[4] Robert E. Longacre, "String Constituent Analysis," Language, XXXVI (January-March, 1960), pp. 63-68.

[5] Paul M. Postal, "Constituent Structure: A Study of Contemporary Models of Syntactic Description," International Journal of American Linguistics (January, 1964), pp. 72-77.

Although such knowledge is both interesting and pertinent, it did not seem to be of vital significance in describing the syntactic patterns used by children.[7] The instrument of the Nebraska Study does not attempt to be a grammar of English; it is merely a device for describing readily the syntactic elements which appear in written composition. The purpose of the instrument is not to describe all of the structures available in English and their interrelationships; it is to provide a usable set of symbols representing the major slots and constituents found within the syntactic patterns used by children. As such it works.

THE SYSTEM OF ANALYSIS

Language scholars do not always agree on the number of distinctive sentence patterns used by speakers and writers of the English language; most grammarians and linguists suggest from five to ten or more. In order to obtain the information desired in this study, twelve sentence types, listed below, were identified and found to be adequate and distinguishable. The syntactic analyst's judgments on sentence types were accepted in conferences with several linguists and verified by working with the corpus of thousands of children's sentences. Anyone else using the same categories and the same compositions would be able to make the same judgments and obtain virtually the same results as did the syntactic analyst.

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[6] Noam Chomsky, "Current Issues in Linguistic Theory," in Fodor and Katz The Structure of Language (Englewood Cliffs, New Jersey: Prentice Hall, 1964), p. 66.

[7] It should be observed that Donald Nemanich, syntactic analyst for the study, has been trained in structural, transformational, and tagmemic grammar.

The following sentence types have been identified:

1. 1 2 subject-verb

   She fell down.

2. 1 2 4 subject-verb-object

   She chased him.

3. 1 2 3 4 subject-verb-indirect object-direct object

   She gave him money.

4. 1 2 4 6 subject-verb-direct object- noun objective complement

   She called him a monkey.

5. 1 2 4 6A subject-verb-direct object-adjective objective complement

   She keeps her room neat.

6. 1 2B 5 subject-linking verb-noun or pronoun complement

   She is a pleasant girl.

7. 1 2B 5A subject-linking verb-adjective complement

   She is always cheerful.

8. 1 2P subject-passive verb

   She was pushed.

9. T1 2B 1 expletive "there"-verb-subject

   There were three winners.

In addition to these nine basic patterns, three additional sentence types were identified as being syntactically significant:

10. All questions

    Where is she now?

11. All inversions

    Happy she was.

12. All compound predicates

She went home and cleaned her room.

It should be noted that any sentence of the latter three types will also be a variation of one or more of the nine basic patterns. Thus, "Who did she push?" is a question, but it is also a 1 2 4 sentence--subject-verb-object.

Each independent clause was treated as a separate sentence in much the same way as was done in the Hunt[8] and Ashida[9] studies. Hunt defines a T-unit in this manner:

> For lack of a better name I call these units "minimal terminable units." They are "terminable" in the sense that it is grammatically acceptable to terminate each one with a capital letter at the beginning and a period or question mark at the end. They are "minimal" in the sense that they are the shortest units into which a piece of discourse can be cut without leaving any sentence fragments or residue. They are thus "minimal terminable units." I wish I could call these units "the shortest allowable sentences" but instead I call them "T-units," for short. To repeat, each is exactly one main clause plus whatever subordinate clauses are attached to that main clause.[10]

In this study T-units were identified, then classified in only one of the sentence types in this manner: first, all sentences with compound predicates were put into a single category, sentence type 12; second, all questions and inverted sentences were combined with others like them in sentence types 10 and 11, respectively; and third, the remaining sentences, about ninety percent, were categorized into the nine sentence patterns, 1-9, based on major sentence level slots.

During the first two years of the Nebraska Study all syntactic patterns were categorized as precisely as possible; for example, all the constituents of each noun phrase were identified--pre-determiner, determiner, adjective, possessive noun or pronoun, attributive noun, head noun, and post-nominal modifiers. The resulting frequencies for individual patterns were small (200 different patterns for the object slot alone) and differences in frequencies for the various groups studied were not as large as might be expected. Therefore, in the present investigation, types of structures, rather than individual variations were tallied. Only those syntactic structures which were expected to appear with moderate or considerable frequency were tallied, and only those which seemed to be the most significant indicators of linguistic growth. For example, the frequency of use of subordinate clauses, verbal phrases, or multi-level sentences appears to be far more indicative of a student's level of syntactic maturity than is the total use of nouns or adjectives.

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[8] Kellogg W. Hunt, "Recent Measures in Syntactic Development," _Elementary English_, XLIII (November, 1966), p. 737.

[9] Margaret E. Ashida, "Form, Syntax, and Statistics: A Quantitative Approach to Written Composition" (unpublished doctoral dissertation, University of Nebraska, 1967).

[10] Hunt, _loc. cit._

The thirty-six syntactic items (the twelve basic sentence types and twenty-four additional items) selected for detailed study include those syntactic items which were thought to be most significant in determining language growth. One of these important indicators of linguistic growth is the use of adverbial elements--words, phrases, or clauses--thus, virtually all slots in the clause exclusive of noun, verb, or adjective slots. Such adverbial modifiers were identified as either movable (M) or fixed (F) depending on how freely they can be moved to other positions in the clause.

The numbers 1 to 5 following M or F indicate the relative position of the slot within the clause. Essentially, M1 or F1 are at the beginning of the clause, preceding the subject; M2 or F2 follow the first major slot, usually coming between subject and verb; M3 or F3 come within the verb, dividing it; M4 or F4 follow the verb, usually ending a clause that contains a verb without object or complement; and M5 or F5 follow object or complement. More than one adverbial slot may be found in any of these positions.

Eleven different varieties of M's and F's and combinations of them were studied. The M2's and M3's were combined because of the low frequencies of the individual varieties; the same was done with F1, F2, and F3. Tallies were made, not only for the varieties of M's and F's, but also for total M's, total F's, and total M's and F's combined, providing information about total use of the two types of adverbials and total use of clausal adverbials. There was also a tally made of M4, M5, F4, and F5 combined to provide information about the total use of terminal adverbials. Thus, tallies of M's and F's alone provided eleven different bits of information about syntactic growth.

Four additional criteria of linguistic growth were the use of three types of subordinate clauses—noun, adjective, and adverb--and the total use of subordinate clauses. In a similar manner, four types of verbal phrases and the total use of verbal phrases provided five additional ways of measuring a child's language growth. Two other measures of growth were the frequency of use of sentences of three or more levels and sentences of four or more levels of nested constituents. Total use of prepositional phrases and total number of different sentence patterns used per composition were also tallied. Thus, thirty-six different syntactic items were isolated for detailed analysis.

CHAPTER V

ANALYSIS AND INTERPRETATION OF THE DATA

One of the major objectives in this research was to describe and analyze the data by methods which would permit a clear understanding by the reader and which would also permit replication of the study by other researchers. An overview of the study is presented in this chapter introduction for the purpose of additional clarification.

This investigation was conducted to obtain information about the syntax of the writing of children in the third and sixth grades who were participating in three different language arts programs. The two experimental programs, A and B, represent intensive-treatment and moderate-treatment programs with respect to the curriculum materials used; in the control program, identified as C, these materials were not used.

The syntax of the writing of children in the three different treatment programs was compared to the syntax of professional writers. Comparisons were made in regard to the performances of total groups and of high, middle, and low IQ subgroups. The results of these comparisons are presented in Part I of this chapter.

Part II reveals the findings of a comparison which was made of the syntactic gains of the three treatment groups during a period of time roughly equivalent to one-half a school year, from October to February. The findings are again presented in terms of total groups and of high, middle, and low IQ subgroups.

In Part III information is presented concerning the relationship between initial performance and amount of gain shown; therefore, the focus in this comparison is somewhat different in that correlations were determined on a within-group basis rather than on a between-group basis. Again, the results are presented for total groups and for IQ subgroups.

The final section of this chapter, Part IV, is devoted to the findings of a comparison of the syntactic performance of girls and boys. In this part of the research, information was sought concerning the syntax of girls and boys in terms of IQ levels; however, subdividing the original high, middle, and low IQ subgroups (N=10) into girls and boys would have resulted in samples of inadequate size. The A, B, and C Groups were, therefore, combined in order to maintain an adequate number of subjects at the high, middle, and low IQ levels.

As explained in Chapter IV, thirty-six different items were isolated for study in the syntactic analysis. In the presentation of the data the items have been grouped into six categories, unequal in size, but necessarily so when viewed in the light of logical syntactic divisions. In each of the four major parts of this chapter, the same basic pattern of organization has been followed in the presentation of findings:

1. Sentence Types
2. Subordinate Clauses
3. Verbal Phrases
4. Adverbials
5. Prepositional Phrases
6. Sentence Levels

Because of the many variables and the rather complex nature of the study, the investigators were faced with the problem of condensing this report as much as possible without deleting pertinent information; hence, for the sake of readability, the decision was made to reduce the body of this report and to include an appendices section of greater-than-usual proportions. There the reader will find more detailed information concerning the schools, subjects, professional writers, treatment-programs, procedures, and also, some of the tables which, although an integral part of the study, were considered to be of lesser significance.

PART I. A COMPARISON OF THE SYNTAX OF CHILDREN AND PROFESSIONAL WRITERS

General Description of the Corpus

The sample of writing chosen to represent the syntax of mature writers consisted of 500 sentences which were taken from the works of professional writers. The number of sentences contributed by the various groups of children was permitted to vary, intentionally, in order to obtain information concerning total output when the variable of time was held constant. Two compositions were collected from each of the 180 children making a composite total of 360 compositions containing 6,392 sentences.

Table V shows the total number of sentences (T-units) written by the experimental and control groups at grades three and six. Here the number of sentences in the pre-treatment and post-treatment compositions were combined to provide information concerning the total contribution, in terms of number of sentences, of each of the children's groups. The table reveals that the total production of the sixth grade was almost double that of the third grade.

TABLE V

TOTAL FREQUENCY OF T-UNITS WRITTEN BY GROUPS A, B, AND C AT GRADES 3 AND 6

N = 30 For Each Group

Group	T-units		
	Grade 3	Grade 6	Total
A (Experimental I)	782	1403	2185
B (Experimental II)	698	1161	1859
C (Control)	864	1484	2348
Total	2344	4048	6392

Table VI answers the question: What part of the total corpus of sentences produced by third-grade children was contributed by each of the IQ subgroups of Groups A, B, and C? If each of the nine subgroups had contributed equally, the percentage figure for each group would have been 11.11 per cent. Table VI shows that seven of the groups were within a deviation range of one per cent above and below 11.11 per cent. The high IQ subgroup of Group C contributed the highest proportion and the Group B low IQ subgroup contributed the lowest proportion. The totals column reveals that Group A (Experimental I) produced almost exactly one-third of the total third-grade corpus; Group C (Control) produced the most sentences; and Group B (Experimental II) produced the fewest.

TABLE VI

PERCENTAGE OF TOTAL PRODUCTION OF T-UNITS CONTRIBUTED BY EACH IQ SUBGROUP OF GROUPS A, B, AND C AT GRADE 3

N = 10 For Each Subgroup

Group	High	Middle	Low	Total
A	11.81%	11.06%	10.53%	33.40%
B	10.45	10.40	8.91	29.76
C	15.52	12.11	9.21	36.84
Total	37.78	33.57	28.65	100.00

Table VII gives the same type of information for the sixth-grade subgroups. The Group C middle IQ children contributed a larger proportion of sentences to the total corpus than any other subgroup, and the Group B low IQ children produced the fewest number of sentences. Again the totals column reveals that Group A produced about one-third of the sixth-grade corpus with Group C contributing a somewhat greater proportion and Group B a lesser proportion.

TABLE VII

PERCENTAGE OF TOTAL PRODUCTION OF T-UNITS CONTRIBUTED BY EACH IQ SUBGROUP OF GROUPS A, B, AND C AT GRADE 6

N = 10 For Each Subgroup

Group	High	Middle	Low	Total
A	13.34%	10.18%	11.14%	34.66%
B	10.20	9.98	8.49	28.67
C	10.90	14.23	11.54	36.67
Total	34.44	34.39	31.17	100.00

Tables VI and VII provided information concerning the proportionate contribution of each subgroup to the total corpus at each grade level. The next four tables are different in that the figures show the actual number of sentences (T-units) produced. Table VIII shows the average number of sentences written per pupil at grade three. Again, pre- and post-compositions were combined to provide this information. The high IQ children of Group C averaged the most sentences, approximately 36, and the low IQ children of Group B averaged the fewest, approximately 21.

TABLE VIII

MEAN OF TOTAL PRODUCTION OF T-UNITS FOR EACH IQ SUBGROUP
OF GROUPS A, B, AND C AT GRADE 3

N = 10 For Each Subgroup

Group	High	Middle	Low	Total
A	27.7	25.8	24.7	26.1
B	24.5	24.4	20.9	23.3
C	36.6	28.4	21.6	28.8
Total	29.5	26.2	22.6	

Table IX shows that, at the sixth-grade level, the middle IQ children of Group C averaged slightly more than 57 sentences in the two compositions, the highest number, whereas the low IQ children of Group B averaged about 34 sentences, the lowest number.

TABLE IX

MEAN OF TOTAL PRODUCTION OF T-UNITS FOR EACH IQ SUBGROUP OF GROUPS A, B, AND C AT GRADE 6

N = 10 For Each Subgroup

Group	High	Middle	Low	Total
A	54.0	41.2	45.1	46.8
B	41.3	40.4	34.4	38.7
C	44.1	57.6	46.7	49.5
Total	46.5	46.4	42.7	

At both third- and sixth-grade levels, Group C children wrote the most sentences; Group A children wrote two or three sentences fewer; and Group B children produced the smallest number of sentences. At the sixth-grade level, the Group B children wrote considerably less, only about three-fourths the number of sentences written by the A and C groups.

Tables X and XI give the average number of sentences written in both the pre- and post compositions and also the difference between the two, or gain. The information is presented in terms of high, middle, and low IQ subgroups of Groups A, B, and C. All third- and sixth-grade groups were divided into equal thirds; this resulted in an N of 10 in each of the subgroups. As shown in earlier tables, the IQ means and standard deviations for the third-grade groups differed from those of the sixth-grade groups. Approximately one-half the children in the third-grade sample were below 100 in terms of total intelligence, whereas only one set of "triplets", three subjects, were below 100 at the sixth-grade level. Accordingly, the terms _high_, _middle_, and _low_ are relative in this study. Overall, the third-grade sample should be regarded as being below the norm and the sixth-grade sample as above the norm.

TABLE X

MEAN T-UNIT PRODUCTION OF PRE- AND POST-COMPOSITIONS AND GAIN
FOR EACH IQ SUBGROUP OF GROUPS A, B, AND C
AT GRADE 3

N = 10 For Each Subgroup

Group	High			Middle			Low		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
A	10.9	16.8	+5.9	8.5	17.3	+8.8	10.3	14.4	+4.1
B	10.2	14.3	+4.1	12.2	12.2	0	8.8	12.1	+3.3
C	20.7	15.7	-5.0	13.2	15.2	+2.0	11.3	10.3	-1.0

TABLE XI

MEAN T-UNIT PRODUCTION OF PRE- AND POST-COMPOSITIONS AND GAIN
FOR EACH IQ SUBGROUP OF GROUPS A, B, AND C
AT GRADE 6

N = 10 For Each Subgroup

Group	High			Middle			Low		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
A	22.6	31.4	+8.8	21.1	20.1	-1.0	21.5	23.6	+2.1
B	20.2	21.1	+ .9	19.1	21.3	+2.2	16.2	18.2	+2.0
C	22.1	22.0	- .1	33.0	24.6	-8.4	21.7	25.0	+3.3

The reader will note that Tables X and XI and the five previous tables have all been concerned with volume of production only, and should not be interpreted as an indication of quality. The tables were included (1) to provide an overall description of the total corpus, and (2) to point up the fact that sheer volume did not guarantee superiority in terms of the syntactic items analyzed.

Total Group Comparison

Sentence types. The results shown in the children-professional-writer comparison are based on an analysis of the post-treatment compositions, those written at the conclusion of the study.

The frequency of use of each sentence type was tallied for the experimental groups (A and B) and the control group (C) at grades three and six, and for the group of professional writers. In Table XII, Sentence Types, percentages and frequencies are given for each group. Appearing at the head of each column is the total number of sentences in the corpus for each group. These figures were used as denominators in deriving the percentages shown. The number in parenthesis is the actual frequency of occurrence of the syntactic item identified at the left. The resulting percentage made comparison of groups possible despite an unequal number of sentences within each corpus. For example, the 1 2 pattern appeared in 131 of the 485 sentences written by the third-grade Group A children; therefore, 27 per cent or 27 out of each 100 sentences written by this group were 1 2 pattern or subject-verb sentences. (Examples of sentences of the various types are shown in Appendix F.)

Approximately 30 per cent (29.8) of the professional writers' sentences were of the 1 2 pattern. The percentages for the children's groups were very

TABLE XII

SENTENCE TYPES
PERCENTAGE AND FREQUENCY OF OCCURRENCE
FOR GROUPS A, B, AND C AT GRADES 3 AND 6
N=30 For Each Group of Children
N=25 For Professional Writers

Sentence Types	Grade 3			Grade 6			
	A	B	C	A	B	C	Pro Writers
	485[a]	386	412	751	606	716	500
1 2	27.0% (131)[b]	31.3% (121)	21.6% (89)	26.9% (202	29.4% (178)	31.3% (224)	29.8% (149)
1 2 4	33.0 (160)	30.6 (118)	43.9 (181)	31.8 (239)	33.0 (200)	34.5 (247)	26.2 (131)
1 2 3 4	3.5 (17)	3.1 (12)	1.5 (6)	1.7 (13)	1.0 (6)	2.1 (15)	1.6 (8)
1 2 4 6	1.2 (6)	0 (0)	0 (0)	.5 (4)	.2 (1)	.4 (3)	.2 (1)
1 2 4 6A	.2 (1)	0 (0)	0 (0)	.1 (1)	0 (0)	0 (0)	.8 (4)
1 2B 5	12.4 (60)	8.5 (33)	10.0 (41)	11.6 (87)	10.7 (65)	9.6 (69)	9.4 (47)
1 2B 5A	6.4 (31)	9.1 (35)	8.7 (36)	9.6 (72)	6.4 (39)	5.4 (39)	11.4 (57)
1 2P	1.4 (7)	1.0 (4)	.2 (1)	1.5 (11)	1.7 (10)	2.1 (15)	1.8 (9)
T1	2.3 (11)	5.4 (21)	5.3 (22)	2.0 (15)	3.3 (20)	1.7 (12)	3.8 (19)
Inverted Sentences	2.1 (10)	.8 (3)	.2 (1)	2.8 (21)	1.0 (6)	2.5 (18)	3.4 (17)
W (Questions)	2.7 (13)	2.8 (11)	1.7 (7)	2.7 (20)	1.7 (10)	2.0 (14)	.8 (4)
Compound Predicates	7.8 (38)	7.3 (28)	6.8 (28)	8.8 (66)	11.7 (71)	8.4 (60)	10.8 (54)

[a] Total sentences written
[b] Frequency

similar with the exception of one group (3C) which used substantially fewer (21.6) 1 2 sentences than the professional writers or any of the other groups of children. In general, third-grade children used a slightly smaller proportion of 1 2 sentences than did the sixth grade, the latter using approximately the same proportion as the professional writers.

The professional writers used the 1 2 4 pattern in approximately one-fourth of their sentences. All children's groups used this pattern with greater frequency (30.6 to 43.9 per cent of total sentences). In contrast to the increase in the use of the 1 2 pattern at grade six, decrease in the use of the 1 2 4 pattern is apparent at this grade. This indicates a desirable adjustment toward the criterion of mature writing as exhibited by the writing of the professional group. At both grades the experimental groups (A and B) tended to approach this criterion more closely than the control groups (C).

Few meaningful comparisons can be made of the 1 2 3 4, 1 2 4 6, and 1 2 4 6A patterns because of low (or nonexistent) frequencies. However, the proportion of sentences of the 1 2 3 4 pattern was higher for the two third-grade experimental groups (3.5 for A, 3.1 for B) than for any other group.

The proportions found for the 1 2B 5 pattern tend to be quite similar for all groups. Approximately one-tenth (9.4) of the professional writers' sentences were of this pattern. Group 6C most closely approximated that proportion (9.6), but no group was found to vary significantly from the professional criterion.

Approximately eleven of each one hundred sentences of the professional writers were of the 1 2B 5A pattern. This was a larger proportion than was found in any of the children's groups. The two groups coming closest to the professionals were the 3B (9.1) and 6A (9.6) groups. The 6C group used less than any other group (5.4), about half the proportion used by the professionals.

The passive 1 2P pattern was used infrequently by the professionals (1.8) and all groups. The proportions of the three sixth-grade groups were very similar to the professionals (1.5, 1.7, 2.1). One of the third-grade groups, the 3A group (1.4), approached the performance of the sixth-grade pupils and the professionals.

Professional writers used the T1 pattern about four per cent of the time. Group 6B comes closest to this with 3.3 of each one hundred sentences. Group 6C used this pattern less (1.7) than any other group. Two of the third-grade groups used the expletive pattern somewhat more frequently than the professionals, probably as a result of the "Once upon a time" beginning, popular with primary children.

Inverted sentences comprised 3.4 per cent of the sentences of professional writers. The sixth grade tended to approach this criterion more closely than did the third grade; however, one third-grade group (3A) used about twice as many inverted sentences as one sixth-grade group (6B) and approached the other sixth-grade groups.

Questions (W) appeared rarely in professional sentences (.8). Proportionately, the groups of children used from two to three and one-half times as many questions, the use ranging from 1.7 to 2.8 per hundred sentences.

The final sentence classification, compound predicates, was used in about 11 per cent of the professional writers' sentences. This was approached more closely by the sixth-grade groups than the third-grade groups. Of the third-grade groups, experimental 3A (7.8) and 3B (7.3) were slightly above 3C (6.8). At grade six, Group B used even more compound predicates than the professionals.

Subordinate clauses. Table XIII reveals the proportion of subordinate clauses per hundred sentences that was used by the various groups. In every instance, the group of professional writers was found to employ more clause structures than the children. The 3B and 6A groups used more adverb clauses than the other groups of children and, by so doing, came considerably closer to the professional criterion. In the use of adjective and noun clauses, the 6C and 6A groups surpassed the other children's groups.

TABLE XIII

SUBORDINATE CLAUSES
PERCENTAGE AND FREQUENCY OF OCCURRENCE
FOR GROUPS A, B, AND C AT GRADES 3 AND 6

N = 30 For Each Group of Children
N = 25 For Professional Writers

Subordinate Clauses	Grade 3			Grade 6			Pro Writers
	A	B	C	A	B	C	
	485[a]	386	412	751	606	716	500
Adverb	9.5% (46)[b]	15.6% (60)	10.7% (44)	16.2% (122)	12.2% (74)	12.8% (92)	19.2% (96)
Adjective	2.3 (11)	3.4 (13)	3.6 (15)	5.6 (42)	5.0 (30)	7.4 (53)	8.0 (40)
Noun	10.9 (53)	8.5 (33)	6.3 (26)	12.8 (96)	8.5 (52)	13.1 (94)	16.8 (84)
Total	22.7 (110)	27.5 (106)	20.6 (85)	34.6 (260)	25.7 (156)	33.4 (239)	44.0 (220)

[a] Total sentences written

[b] Frequency

In total use of subordinate clauses the 6A group was found to use them in approximately one-third of all sentences written while the professional writers used subordinate clauses in half of their sentences. Most of the other children's groups used subordinate clauses in only one out of every four or five sentences. The information in Table XIII seems to support the findings of other researchers: Increase in use of subordinate clauses parallels chronological maturity. The table clearly reveals that third-grade writers use the fewest number of clauses; sixth-grade writers use considerably more; and professional writers use an even greater proportion of clauses per sentence.

Verbal phrases. Of the different types of verbal phrases shown in Table XIV, children seemed to be able to use the infinitive phrase with greatest facility. As a whole, the third-grade children used fewer infinitives than sixth-graders;

TABLE XIV

VERBAL PHRASES
PERCENTAGE AND FREQUENCY OF OCCURRENCE
FOR GROUPS A, B, AND C AT GRADES 3 AND 6

N = 30 For Each Group of Children
N = 25 For Professional Writers

Verbal Phrases	Grade 3			Grade 6			Pro Writers
	A	B	C	A	B	C	
	485[a]	386	412	751	606	716	500
Infinitive	7.4% (36) [b]	3.4% (13)	3.9% (16)	7.6% (57)	9.4% (57)	7.5% (54)	7.2% (36)
Gerund	1.4 (7)	.5 (2)	.5 (2)	2.8 (21)	1.3 (8)	2.1 (15)	5.6 (28)
Present Participle	.6 (3)	.5 (2)	.2 (1)	3.9 (29)	.5 (3)	4.3 (31)	12.8 (64)
Past Participle	.6 (3)	1.8 (7)	.5 (2)	2.4 (18)	2.5 (15)	1.3 (9)	15.4 (77)
Total	10.1 (49)	6.2 (24)	5.1 (21)	16.6 (125)	13.7 (83)	15.2 (109)	41.0 (205)

[a] Total sentences written

[b] Frequency

however, the performance of the 3A group equaled that of the professionals and two of the sixth-grade groups. One group, 6B, utilized the infinitive phrase to a greater extent than did the professional writers. Gerund phrases and present and past participial phrases occurred with considerably greater frequency in the professional writing than in the children's writing. A glance at the totals at the bottom of Table XIV reveals that mature adult writing contained 41 verbal phrases per hundred sentences, whereas only 16 or 17 of the children's sentences contained verbal phrases. While Group 3A surpassed the two other third-grade groups and 6A surpassed the other two sixth-grade groups, neither came very close to the professional criterion. Apparently, facility in using verbal phrases is an important indicator of syntactic maturity.

Adverbials. In the use of adverbials, Table XV, all children's groups used the M1 slightly more often than did the professionals; however, the frequencies for all groups were fairly consistent with the exception of the 3B group which used ten per cent more M1's than the professional writers.

In the use of M2, M3, M4, and M5 a trend is clearly discernible in that third-grade children use the fewest, with a noticeable increase occurring at the sixth-grade level, and a much greater increase at the professional level. When all varieties of M's were totaled, it became apparent that the professional writers utilized almost twice as many M's as did the student writers.

F1's, F2's, and F3's appeared infrequently at all levels. The 6A and 6C groups were the ones most nearly approximating the performance at the professional level. F4's appeared in 65 of each 100 sentences of the professional sample. Group 6B came the closest to this F4 standard with 46 per hundred sentences. The other two sixth-grade groups and the 3B group also made considerable use of F4's.

TABLE XV

ADVERBIALS
PERCENTAGE AND FREQUENCY OF OCCURRENCE
FOR GROUPS A, B, AND C AT GRADES 3 AND 6
N=30 For Each Group of Children
N=25 For Professional Writers

Adverbials	Grade 3			Grade 6			
	A	B	C	A	B	C	Pro Writers
	485[a]	386	412	751	606	716	500
M1	27.2% (132)[b]	34.5% (133)	25.2% (104)	27.4% (206)	29.5% (179)	24.1% (173)	24.2% (121)
M2, M3	1.9 (9)	2.8 (11)	4.6 (19)	5.6 (42)	5.0 (30)	6.3 (45)	8.2 (41)
M4	4.1 (20)	3.9 (15)	3.4 (14)	4.7 (35)	4.5 (27)	6.8 (49)	21.8 (109)
M5	11.1 (54)	13.5 (52)	11.7 (48)	16.1 (121)	14.5 (88)	16.9 (121)	40.6 (203)
Total M	44.3 (215)	54.7 (211)	44.9 (185)	53.8 (404)	53.5 (324)	54.2 (388)	94.8 (474)
F1, F2, F3	1.2 (6)	.5 (2)	1.5 (6)	2.4 (18)	1.7 (10)	2.8 (20)	3.0 (15)
F4	31.5 (153)	42.2 (163)	27.2 (112)	42.0 (315)	46.4 (281)	45.7 (327)	65.4 (327)
F5	10.5 (51)	8.3 (32)	13.3 (55)	10.0 (75)	12.4 (75)	11.5 (82)	16.0 (80)
Total F	43.1 (210)	51.0 (197)	42.0 (173)	54.3 (408)	60.4 (366)	59.9 (429)	84.4 (422)
Total M, F	87.4 (425)	105.7 (408)	86.9 (358)	108.1 (812)	113.9 (690)	114.1 (817)	173.8 (869)
Total M4, M5, F4, F5	57.3 (278)	67.9 (262)	55.6 (229)	72.8 (546)	77.7 (471)	80.9 (579)	143.8 (719)

[a] Total sentences written

[b] Frequency

The 3C and 6B groups used more F5's than the other children's groups, but they were still below the ratio exhibited in professional writing. In use of total F's the B groups exceeded their counterparts at both the third- and sixth-grade levels, but they did not come up to the adult criterion. The professional sample averaged about one F4 per sentence while the children's writing contained only about half that many.

The children also used only one-half to two-thirds as many total M's and F's as did the professional writers. The proportion of adverbials in the final position--M4, M5, F4, F5--is even less with the children using only one-third to one-half the proportion found in the adult sample. Increase in the use of adverbial elements seems to be another indicator of syntactic maturity.

Prepositional phrases. All of the groups studied made considerable use of prepositional phrases, shown in Table XVI, with a definite increase apparent

TABLE XVI

PREPOSITIONAL PHRASES
PERCENTAGE AND FREQUENCY OF OCCURRENCE
FOR GROUPS A, B, AND C AT GRADES 3 AND 6

N = 30 For Each Group of Children
N = 25 For Professional Writers

Element	Grade 3			Grade 6			Pro Writers
	A	B	C	A	B	C	
	485[a]	386	412	751	606	716	500
Prepositional Phrases	45.8% (222)[b]	52.1% (201)	50.5% (208)	65.0% (488)	68.8% (417)	70.3% (503)	176.4% (882)

[a] Total sentences written

[b] Frequency

from Grade 3 to Grade 6, and with a very sizeable increase evident at the professional level. The adult writers used more than three times as many prepositional phrases as third-grade students and more than twice as many as sixth-grade students. Little variation appears among the three groups at either the third- or sixth-grade level.

Sentence levels. Table XVII clearly shows that more levels appear in the sentences of professional writers than in the sentences written by children. A definite progression is evident both in sentences that go to level 3 and higher and in sentences that go to level 4 and higher. In two of the sixth-grade groups, 6A and 6C, approximately fifteen of every hundred sentences were level 4 or higher, whereas forty per hundred were found in the adult sample. All other children's groups used fewer level 4 sentences with only five or six per hundred for the third-grade group. As might be expected, the disparity between the children's and the professional's sentences was more pronounced for level 4 than for level 3 sentences.

TABLE XVII

LEVELS OF T-UNITS
PERCENTAGE AND FREQUENCY OF OCCURRENCE
FOR GROUPS A, B, AND C AT GRADES 3 AND 6

N = 30 For Each Group of Children
N = 25 For Professional Writers

T-units	Grade 3			Grade 6			Pro Writers
	A	B	C	A	B	C	
	485[a]	386	412	751	606	716	500
Level 3 and Higher	29.3% (142)[b]	30.8% (119)	26.9% (111)	43.0% (323)	42.1% (255)	45.5% (326)	69.0% (345)
Level 4 and Higher	5.8 (28)	5.7 (22)	5.3 (22)	14.5 (109)	11.0 (66)	15.2 (109)	39.6 (198)

[a] Total sentences written

[b] Frequency

Summary. In this section of Part I, comparisons were made of the syntax of professional writers and the syntax of children enrolled in the three different language arts programs at grades three and six. Overall, as one might expect, a rather definite progression was evident as syntactic performance was traced from the third-grade level to the sixth grade level up to the professional level. This progression was evident in subordinate clauses, verbal phrases, adverbials, prepositional phrases, and sentence levels.

Of the twelve comparisons made concerning sentence types at the third-grade level, Group A ranked highest in seven, Group B in four, and Group C in one. At the sixth-grade level, Group A ranked highest in six of the comparisons, Group C in four, and Group B in two.

In the four comparisons made of subordinate clauses: at the third-grade level, Group B was superior in two of the comparisons, with Groups A and C each superior in one; at the sixth-grade level, Groups A and C were tied with each ranking highest in two comparisons.

In the five verbal phrase comparisons at the third grade, Group A excelled in four and Group B in one. At the sixth-grade level, Groups A and B were tied with two highest rankings each; Group C was superior in one of the comparisons.

Eleven comparisons were made of adverbial elements: Group B ranked highest in seven, Group C in three, and Group A in one at the third grade; Group C ranked highest in seven and Group B in four at the sixth grade.

In the use of prepositional phrases Group B surpassed the other two groups at grade three and Group C ranked highest at grade six.

Two comparisons were made of sentence-complexity in terms of levels: level 3 and higher; and level 4 and higher. In the third-grade comparisons the experimental groups, A and B, outranked the control group C, but at the sixth grade, the reverse was found.

The central purpose of the preceding analysis was to provide normative data concerning the syntax of children in the third and sixth grades and how their syntax compares with that of professional writers.

IQ Subgroup Comparisons

The findings presented in this section are based on the performance of IQ subgroups of Groups A, B, and C. Thirty-five tables were needed to present the syntactic analysis data for the eighteen subgroups; eleven of the tables appear in this section and the remainder can be found in Appendix J. The tables were divided in this manner for the purpose of condensing the report without omitting entirely some of the data considered pertinent to the study. The twenty-four tables in the appendix were thought to be less significant than the eleven which follow, Tables XVIII through XXVIII. Information from all tables, however, has been summarized in the following discussion:

Sentence types. Tables for the two most frequently used sentence patterns, 1 2 and 1 2 4, are included in the following presentation of findings. As in the preceding section, the performance of the professional writers was used as a touchstone, thereby permitting a comparison of the writing of children of varying IQ levels with adult writing. Information is presented for high, middle, and low IQ subgroups of grades 3 and 6.

Table XVIII shows that the 1 2 pattern was used by professional writers in 29.8 per cent of their sentences. Grade 6 high IQ children used this pattern slightly more often (31.4) whereas grade 3 high IQ children used it slightly less often (26.5). The experimental third-grade high IQ subgroups, A and B, used the pattern with about the same frequency as sixth-grade pupils and professional writers. Because the control third-grade children used the

TABLE XVIII

1 2 PATTERN
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
				High IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
30.4% (51)[b]	33.6% (48)	15.9% (25)	26.5% (124)	28.7% (90)	32.7% (69)	34.1% (75)	31.4% (234)	29.8% (149)
				Middle IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
26.0% (45)	23.0% (28)	27.6% (42)	25.7% (115)	24.9% (50)	31.0% (66)	33.3% (82)	30.0% (198)	29.8% (149)
				Low IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
24.3% (35)	37.2% (45)	21.4% (22)	27.7% (102)	26.3% (62)	23.6% (43)	26.8% (67)	25.7% (172)	29.8% (149)

[a] Total sentences written by subgroup

[b] Frequency of 1 2 pattern

pattern only about half as often as other subgroups, the proportionate use of the 1 2 sentence was low when all high IQ third-grade groups were totaled. At both grade 3 and grade 6, subgroup B used the pattern more often than subgroup A. Children in the C subgroup at grade 6 used the pattern more often than any other high IQ subgroup, contrasting with the very low use of the pattern by the 3C high IQ students.

At grade 3 and grade 6, the 1 2 pattern was used slightly less often by middle IQ students than by high IQ students. The only exception to this trend was the third-grade control sub-group. Grade 3 middle IQ subgroups used this pattern less often than the professional writers; however, at the sixth grade, two of the three middle IQ groups used more 1 2 sentences than the professional writers.

Low IQ sixth-grade pupils used the 1 2 pattern in one sentence out of every four (25.7), less often than professional writers or high or middle IQ sixth-grade groups. At grade 3 use of this sentence option by low IQ subgroups also tended to be lower than high or middle IQ groups; there is, however, one notable exception--the low 3B subgroup which used the pattern more often than any other third-grade group (37.2).

Table XIX reveals that, in the high IQ range, the 1 2 4 pattern was used more extensively by third-grade children than by sixth-grade children; the third-grade total reveals that 38.0 per cent of the sentences followed this pattern, whereas the sixth-grade total indicates 30.2 per cent. Both grades exceeded the total of the professional writers (26.2). The experimental high IQ subgroups of A and B at each grade level approached the professional criterion more closely than did their control counterparts. Almost half of the sentences (49.7) written by the control third-grade high IQ subgroup

TABLE XIX

1 2 4 PATTERN
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
				High IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
30.4% (51)[b]	34.3% (49)	49.7% (78)	38.0% (178)	27.4% (86)	30.3% (64)	34.1% (75)	30.2% (225)	26.2% (131)
				Middle IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
36.4% (63)	34.4% (42)	36.8% (56)	36.0% (161)	40.8% (82)	29.1% (62)	33.7% (83)	34.4% (227)	26.2% (131)
				Low IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
31.9% (46)	22.3% (27)	45.6% (47)	32.6% (120)	30.1% (71)	40.7% (74)	35.6% (89)	35.0% (234)	26.2% (131)

[a] Total sentences written by subgroup

[b] Frequency of 1 2 4 pattern

were of the 1 2 4 pattern, indicating an extreme dependence on one syntactic option.

In the middle IQ range, the 6B proportion (29.1) paralleled that of the professionals (26.2) more closely than the proportions of any other subgroup. When totals of A, B, and C were combined, the middle IQ subgroups followed the same trend as the high IQ subgroups in that the 1 2 4 pattern appeared more frequently at the third grade than at the sixth grade.

In the low IQ range, children in the sixth grade used the 1 2 4 pattern to a somewhat greater extent (35.0) than did the third-grade children (32.6). This is in contradiction to the overall trend noted earlier. The 3C, 6B, and 6C subgroups deviated most sharply from the professional writers; the 3A, 3B, and 6A proportions were considerably closer to the professional criterion. Overall, the totals for the children's groups, high, middle, and low at grades 3 and 6, ranged from 30.2 to 38.0 with both extremes found in the high IQ subgroups.

The following information has been abstracted from the tables relating to sentence types that appear in Appendix J:

1. The totals of the 1 2B 5 pattern of the combined A, B, and C subgroups provided an interesting comparison: approximately ten per cent of all sentences of all subgroups were of this pattern for third graders, sixth graders, and professionals alike.

2. Since the 1 2B 5A pattern was used with considerably greater frequency by professional writers than by children, its use would appear to be an indication of syntactic maturity, perhaps more than any other pattern. Interestingly, however, at both grades 3 and 6, the high IQ subgroups used the pattern less often than the low groups.

3. The use of the passive, 1 2P pattern, would also seem to be an indicator of linguistic maturity; however, at grade 3 two-thirds of the passives were used by the low IQ group.

4. A considerable decline was noted in the use of the expletive (T1) from grade 3 to grade 6; low IQ subgroups at both grade levels used the sentence type most often, and high IQ subgroups used it least often.

5. At grade 3 the greatest use of questions (W) was in the low IQ subgroups, but at grade 6 the heaviest use was in the high IQ subgroups.

6. Compound predicates were used somewhat more frequently by sixth-grade children than by third-grade children.

The analysis of sentence types used in post-treatment compositions revealed some interesting comparisons in terms of IQ levels, but no conclusive trends were evidenced. It may be that the sample sizes were insufficient to provide normative data; on the other hand, it may be that, regardless of sample size, few definite trends would be discernible--that the sentence patterns opted by writers of varying IQ levels are, for the most part, unpredictable.

Subordinate clauses. Table XX gives percentage and frequency figures for the use of subordinate clauses by all IQ subgroups. The high IQ third-grade children were found to use considerably more subordinate clauses than did the middle or low IQ third graders. This did not hold true at the sixth-grade level. Proportions for the high, middle, and low IQ groups at the sixth grade were found to be very similar--subordinate clauses appeared in approximately one-third of the sentences at all three levels. Interestingly, the high IQ third-grade matched the performances of the sixth-grade groups. Several of the children's groups approached the professional criterion, but none were found to quite equal the standard.

TABLE XX

TOTAL SUBORDINATE CLAUSES PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 and 6

Grade 3				Grade 6				Pro Writers
				High IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
27.4%	39.9%	24.8%	30.3%	32.2%	21.8%	39.5%	31.4%	44.0%
(46)[b]	(57)	(39)	(142)	(101)	(46)	(87)	(234)	(220)
				Middle IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
17.9%	21.3%	15.1%	17.9%	39.3%	27.2%	28.1%	31.2%	44.0%
(31)	(26)	(23)	(80)	(79)	(58)	(69)	(206)	(220)
				Low IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
22.9%	19.0%	22.3%	21.5%	33.9%	28.6%	33.2%	32.2%	44.0%
(33)	(23)	(23)	(79)	(80)	(52)	(83)	(215)	(220)

[a] Total sentences written by subgroup

[b] Frequency of subordinate clauses

The fewest subordinate clauses were found in the 3C middle IQ subgroup, fifteen per hundred sentences, and the highest frequency occurred in the 3B high IQ subgroup, forty per hundred sentences, which compared favorably with the forty-four per cent used by professionals.

The three clause tables in Appendix J reveal:

1. Third-grade children at the high IQ level used the most adverbial clauses, even more than any of the sixth-grade IQ levels.

2. In the use of adjective clauses, both the highest and lowest proportions were found at the low IQ levels.

3. The subgroups coming closest to the professional's use of noun clauses are from the high IQ third-grade (3B) and the middle IQ sixth-grade (6A) levels.

Again, the findings are varied and prohibit the formulation of any definite conclusions regarding the use of subordinate clauses in terms of level of intelligence.

Verbal phrases. The use of verbal phrases by IQ subgroups is presented in Table XXI. Again, differences among IQ levels are not pronounced. In general, sixth-graders used twice as many verbal phrases as did third-graders, and the professionals utilized more than twice as many as the sixth-grade students. The proportions range from fewer than five verbal phrases per hundred sentences (3C middle IQ subgroup) to twenty-five per hundred sentences (6C high IQ subgroup). Even the highest student proportions fell considerably short of the forty-one verbal phrases found in each one hundred sentences of the professional sample.

The three verbal phrase tables in Appendix J are summarized as follows:

1. While both the highest and lowest proportions of infinitives were found at the high IQ level, similar extreme variation was noted at the middle and low IQ levels.

TABLE XXI

VERBAL PHRASES
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
11.3% (19)[b]	5.6% (8)	5.7% (9)	7.7% (36)	11.1% (35)	17.1% (36)	25.0% (55)	16.9% (126)	41.0% (205)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
8.1% (14)	7.4% (9)	4.6% (7)	6.7% (30)	16.9% (34)	14.6% (31)	8.5% (21)	13.0% (86)	41.0% (205)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
11.1% (16)	5.8% (7)	4.9% (5)	7.6% (28)	23.7% (56)	8.8% (16)	13.2% (33)	15.7% (105)	41.0% (205)

[a] Total sentences written by subgroup

[b] Frequency of verbal phrases

2. Of all the subgroups, only the 6A low IQ subgroup equalled the performance of the professionals in the use of gerunds.

3. Generally, the high IQ children used the most present participial phrases, but they did not come close to the professional standard; professionals used four times as many as the sixth-grade high IQ subgroup and twelve times as many as the third-grade high IQ subgroup.

4. All IQ subgroups fell considerably short of the criterion in the use of past participial phrases. The highest proportion, used by the low IQ 6A subgroup, was only one-fourth the proportion used by professionals. At each IQ level, the sixth-grade subgroups used about twice as many past participial phrases as did the third-grade subgroups.

As before, the findings are inconclusive when categorized according to intelligence levels.

Adverbials. Table XXII shows the proportion of M5's used by the various subgroups. The professional writers used M5's in forty per cent of their sentences which was more than double the frequency appearing in most of the children's compositions. The highest frequencies for the children's groups were found in the 6C high IQ subgroup and the 6A low IQ subgroup which used, respectively, twenty-three and twenty-one M5's per hundred sentences. The 3C low IQ subgroup used the M5's the least with only nine appearing in each one hundred sentences. The totals for the combined A, B, and C groups show a rather definite progression from the low IQ third-grade level up to the high IQ sixth-grade level. Overall, it seems that increase in use of M5's coincides with increase in level of total intelligence.

The percentages and frequencies of all movable adverbial elements (M's) were combined in Table XXIII. The professional writers' sample averaged one

TABLE XXII

M5's
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 and 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
14.9% (25)[b]	13.8% (20)	12.1% (19)	13.7% (64)	11.8% (37)	19.9% (42)	23.2% (51)	17.4% (130)	40.6% (203)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
9.2% (16)	12.3% (15)	13.2% (20)	11.4% (51)	16.9% (34)	11.7% (25)	14.6% (36)	14.4% (95)	40.6% (203)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
9.0% (13)	14.0% (17)	8.7% (9)	10.6% (31)	21.2% (50)	11.5% (21)	13.6% (34)	15.7% (105)	40.6% (203)

[a] Total sentences written by subgroup

[b] Frequency of M5's

TABLE XXIII

TOTAL M's
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
50.6% (85)[b]	52.4% (76)	54.1% (85)	52.6% (246)	47.5% (149)	65.9% (139)	71.8% (158)	59.9% (446)	94.8% (474)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
39.9% (69)	61.5% (75)	42.1% (64)	46.5% (208)	62.2% (125)	45.1% (96)	47.2% (116)	51.1% (337)	94.8% (474)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
42.4% (61)	49.6% (60)	35.0% (36)	42.6% (157)	55.1% (130)	48.9% (89)	45.6% (114)	49.9% (333)	94.8% (474)

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[a] Total sentences written by subgroup

[b] Frequency of total M's

movable per sentence (ninety-five per hundred sentences) which was about twice the proportion used by most of the IQ subgroups. In general, the low IQ third-grade subgroups used the smallest number of M's and the high IQ sixth-grade subgroups used the most. However, the performances of all the high IQ third-graders were comparable to the performances of the low and middle IQ subgroups at grade 6, as was the performance of the 3B middle IQ subgroup.

Results of the F4 analysis are given in Table XXIV. The findings reveal a steady increase in the use of F4's from the third-grade low IQ subgroups progressively upward through the high IQ sixth-grade subgroups and on up to the professional standard. The totals for each grade indicate that high IQ children use more F4's than either middle or low IQ children. The 6C and 6B high IQ subgroups approached the standard more closely than all other subgroups. The 3C low IQ subgroup used the fewest F4's.

Increase in use of F4's and M5's seems to coincide with increase in level of total intelligence; in both cases, none of the student subgroups were able to equal the professional performance.

Table XXV presents the data for all fixed adverbial elements (F's) combined. In both grades more F's were used at the high IQ level than at the middle IQ level, and more were used at the middle level than at the low level. The 3B and 6C high IQ subgroups surpassed all other subgroups in grades three and six respectively. Low IQ subgroups 3A and 3C used fewer F's than all other subgroups. Professional writers were found to use more adverbials than the students at either grade.

At both grades the performance of high IQ children was found to be superior in the M5, Total M, F4, and Total F comparisons.

TABLE XXIV

F4's
PERCENTAGE AND FREQUENCY OF OCCURRENCE
IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS
OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
40.5% (68)[b]	46.2% (67)	25.5% (40)	37.4% (175)	38.2% (120)	54.5% (115)	56.3% (124)	48.2% (359)	65.4% (327)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
30.6% (53)	36.9% (45)	34.2% (52)	33.6% (150)	44.8% (90)	42.7% (91)	41.1% (101)	42.7% (282)	65.4% (327)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
22.2% (32)	42.1% (51)	19.4% (20)	28.0% (103)	44.5% (105)	41.2% (75)	40.8% (102)	42.2% (282)	65.4% (327)

[a] Total sentences written by subgroup

[b] Frequency of F4's

TABLE XXV

TOTAL F's
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
53.0%	57.9%	43.9%	51.7%	48.4%	64.5%	70.0%	59.3%	84.4%
(89)[b]	(84)	(69)	(242)	(152)	(136)	(154)	(442)	(422)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
42.8%	46.7%	45.4%	44.7%	60.7%	61.0%	52.4%	57.7%	84.4%
(74)	(57)	(69)	(200)	(122)	(130)	(129)	(381)	(422)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
32.6%	46.3%	34.0%	37.5%	56.8%	54.9%	58.4%	56.9%	84.4%
(47)	(56)	(35)	(138)	(134)	(100)	(146)	(380)	(422)

[a] Total sentences written by subgroup

[b] Frequency of total F's

The remainder of the adverbial tables, in Appendix J, are summarized as follows:

1. When the A, B, and C subgroups were combined at each of the three IQ levels, similar proportions of M1's were found for high, middle, and low IQ children at both grades; all were slightly above the proportion used by the professional writers.

2. High IQ sixth-grade children used M2's and M3's almost as often as did the adult writers.

3. Sixth-grade children at the high IQ level used considerably more M4's than other IQ levels at either grade; however, the high IQ sixth-graders used only one-third as many M4's as the professionals.

4. F1's, F2's, and F3's appeared infrequently at each IQ level and at the professional level; middle IQ sixth-graders used approximately the same proportion found in the standard.

5. High IQ third-grade children approached the professionals' use of F5's more closely than children of any other IQ level at grades 3 and 6.

6. In total use of adverbials in the final position--M4, M5, F4, F5--a rather definite progression was evident. Beginning with the low IQ level at grade 3, the proportions increased steadily up to the high IQ level at grade 6, the latter group exhibiting slightly more than half the ratio used by professional writers.

7. In total use of M's and F's, high IQ children at both grades surpassed the children of the middle and low IQ levels. Professional writers used almost two per sentence whereas the children averaged about one per sentence.

Generally, high IQ children approached more closely the professionals' use of adverbials than either middle or low IQ children. In most cases this was true at both grades.

Prepositional phrases. Table XXVI shows that prepositional phrases were used in about half of the sentences written by third-grade children and in three-fourths of the sentences written by some of the sixth-grade subgroups; professional writers used 176 prepositional phrases per 100 sentences, more than twice the proportion of the sixth-grade writers. A progression is apparent with the lowest frequency at the third-grade low IQ level and the highest frequency for the children appearing at the sixth-grade high IQ level.

When Table XXVI, Prepositional Phrases, and Table XX, Subordinate Clauses, were compared an interesting trend was noted. At both grades prepositional phrases were used in a ratio of two for each subordinate clause. This does not mean that each sentence containing a subordinate clause also contained two prepositional phrases; it does mean that prepositional phrases appeared twice as often as clauses and that close approximations of the proportion of prepositional phrases can be estimated by doubling the proportions found in the subordinate clause table. It also means that an estimation of subordinate clauses can be found by dividing by two each of the figures appearing in Table XXVI, with the exception of the professional writers' proportion which must be divided by four, the ratio being four prepositional phrases per clause.

Sentence levels. In Table XXVII percentages and frequencies are given for sentences containing three or more levels. (An explanation of sentence levels appears in Chapter IV.) As in several other tables, the proportions show a rather steady progression from the low IQ third-grade subgroups up to the high IQ sixth-grade subgroups and on up to the proportion found in professional writing.

TABLE XXVI

PREPOSITIONAL PHRASES
PERCENTAGE AND FREQUENCY OF OCCURRENCE
IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS
OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
				High IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
52.4%	47.6%	55.4%	51.9%	64.6%	73.9%	83.2%	72.8%	176.4%
(88)[b]	(68)	(87)	(243)	(203)	(156)	(183)	(542)	(882)
				Middle IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
45.1%	62.3%	55.3%	53.2%	67.7%	71.4%	62.2%	66.8%	176.4%
(78)	(76)	(84)	(238)	(136)	(152)	(153)	(441)	(882)
				Low IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
38.9%	47.1%	35.9%	40.7%	63.1%	59.9%	66.8%	63.6%	176.4%
(56)	(57)	(37)	(150)	(149)	(109)	(167)	(425)	(882)

[a] Total sentences written by subgroup

[b] Frequency of prepositional phrases

At the third-grade low IQ range approximately one-fourth of all sentences go to the third level or above; at the third-grade high IQ range about one-third of the sentences contain three or more levels. The sixth-grade proportions reveal that about half of the sentences at this grade are level three or higher. Of the professional writers' sample, seven of every ten sentences are in this category.

Both the highest and the lowest proportions were found in the control samples--the middle IQ 3C subgroup with 23.7 per cent and the high IQ 6C subgroup with 55.0 per cent.

In Table XXVIII findings are presented for sentences of level four-or-higher complexity. An overall inspection of the table reveals that sixth-grade children wrote more than twice as many level four-or-higher sentences as third-grade children and that the professionals wrote more than twice as many as sixth-grade children.

In the third grade, subgroup A surpassed the other two at the high and low IQ levels, and subgroup B excelled at the middle IQ level. In the sixth grade, subgroup C was superior at the high IQ level and subgroup A surpassed the others at the middle and low IQ levels. Overall, the variances were not extreme; the performances of the A, B, and C subgroups within each IQ level subdivision were more similar than in most of the preceding tables.

In the level three comparisons, and frequently in several other comparisons of syntax, one or more of the third-grade high IQ subgroups were found to equal the performance of one or more of the sixth-grade subgroups. Also, one or more of the sixth-grade subgroups were sometimes found to match third-grade performance more closely than that of their age-mates. This did not occur in the use of level four-or-higher sentences; in no case was there any overlapping between

TABLE XXVII

T-UNITS LEVEL 3 AND HIGHER PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
				High IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
34.5%	33.6%	30.6%	32.9%	42.0%	45.1%	55.0%	46.7%	69.0%
(58)[b]	(48)	(48)	(154)	(132)	(95)	(121)	(348)	(345)
				Middle IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
25.4%	33.6%	23.7%	27.1%	42.8%	42.7%	37.4%	40.8%	69.0%
(44)	(41)	(36)	(121)	(86)	(91)	(92)	(269)	(345)
				Low IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
27.8%	24.8%	26.2%	26.4%	44.4%	37.9%	45.2%	42.9%	69.0%
(40)	(30)	(27)	(97)	(105)	(69)	(113)	(287)	(345)

[a] Total sentences written by subgroup

[b] Frequency of T-units Level 3 and Higher

TABLE XXVIII

T-UNITS LEVEL 4 AND HIGHER
PERCENTAGE AND FREQUENCY OF OCCURRENCE
IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS
OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
7.1%	6.3%	6.4%	6.6%	15.0%	10.0%	21.8%	15.6%	39.6%
(12)[b]	(9)	(10)	(31)	(47)	(21)	(48)	(116)	(198)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
6.4%	7.3%	5.9%	6.5%	10.9%	10.8%	10.1%	10.6%	39.6%
(11)	(9)	(9)	(29)	(22)	(23)	(25)	(70)	(198)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
3.5%	3.3%	2.9%	3.3%	16.9%	12.1%	14.4%	14.7%	39.6%
(5)	(4)	(3)	(12)	(40)	(22)	(36)	(98)	(198)

[a] Total sentences written by subgroup

[b] Frequency of T-units Level 4 and Higher

grades or between sixth grade and the professional group. Rather definite demarcation areas exist, separating the three age-level groups, as shown by the following approximations:

Third Grade --	3 to 7 per cent
Sixth Grade --	10 to 17 per cent
Professional--	40 per cent

It may be that the ratio of level four-or-higher sentences separates the immature writer from the mature writer with more consistent accuracy than any other factor.

Summary. In Part I of this chapter, the syntax of children was compared to the syntax of professional writers. The compositions used in this comparison were those written at the conclusion of the experiment.

When the syntax of children of varying IQ levels was analyzed, it was found that, in general, the syntax of high IQ children came closest to the professional standard. This was not the case, however, in the comparisons made of sentence types used. The low IQ children came closest to the criterion in 6 of the 12 comparisons, both at grade three and at grade six; high IQ children came the closest in 4 of the comparisons of sentence types at both grades, and middle IQ children ranked highest in 2 comparisons at grade three and 1 at grade six. One of the comparisons at grade six resulted in a tie between middle and low IQ children.

Strange as it might seem, the low IQ children were superior (in terms of matching the performance of the professionals) in the comparisons of sentence types. Actually, this finding supports the thesis that first-level analysis (sentence patterns) does not reveal the components which separate good writing from poor writing. Children of all IQ levels appeared to have mastered certain basic sentence patterns.

It would seem, then, that the teaching of sentence patterns can be justified only when used as a means of clarifying the relationship of other syntactic elements to the basic patterns. On the basis of the results of this study and others, the teaching of sentence patterns should be considered as means, not ends.

Of the 23 additional comparisons made, the high IQ children were definitely superior. At the third grade, the high IQ children came closest to the professional performance in 19 of the 23 comparisons and they were tied with the middle IQ children in one case. In addition to the tie just mentioned, the middle IQ children were superior in 1 comparison, and the low IQ group ranked highest in 2 of the 23 comparisons. At the sixth grade, high IQ children ranked highest in 15 of the 23, and they were tied with the low IQ children in 1 comparison; the middle IQ children excelled in 2 comparisons while the low IQ students ranked highest in 5 comparisons in addition to the tie.

A further breakdown of the 23 syntactic comparisons reveals that third-grade high IQ pupils ranked highest in all 4 of the subordinate clause comparisons; however, at grade six, the low IQ pupils excelled in 3 of the comparisons (albeit by only a small margin), and the middle IQ pupils in 1 comparison.

In the use of verbal phrases, the high IQ children at both grades ranked highest in 3 of the 5 comparisons and they were tied in 1 additional comparison. At grade three, the middle IQ children shared the 1 tie, and the low IQs were superior in 1 comparison. At grade six, the tie was shared with the low IQ children who were, in addition, the superior group in 1 comparison.

When adverbial elements were compared, the high IQ children out-performed the others at grade three in 10 of the 11 comparisons, and at grade six in 9 of the 11. The middle IQ sixth-grade children excelled in 1 comparison and the low IQ children in each grade ranked highest on 1 of the 11 variables.

In the use of prepositional phrases, the professional standard was approached most closely by the middle IQ students at grade three and by the high IQ students at grade six.

In the two analyses of sentence levels, the high IQ children outranked the others in both comparisons at both grade levels.

The findings of this part of the study seem to indicate that, in terms of syntactic maturity, the most significant factors are sentence levels, adverbials, and verbal phrases. In the preceding analysis, those three factors appeared to be even more discriminative than the use of subordinate clauses in determining how the syntax of children of varying IQ levels differs from the syntax of professional writers.

If the writing of children is to be improved, it would seem that more emphasis in the elementary curriculum (than is currently found) should be given to language experiences and explorations which focus on adverbial elements, verbal phrases, and sentence levels.

The preceding discussion has been concerned with the performances of high, middle, and low IQ children. The performances of children in programs A, B, and C were combined for the purpose of establishing normative data in terms of total intelligence.

The discussion which follows is based on an analysis of the data in terms of the performances of the children in programs A, B, and C; therefore, instead of thirty-five comparisons as in the preceding analysis, the number becomes 3 times 35, or 105 comparisons at each grade level. In a sense, 35 tests were conducted at each IQ level, making a total of 105 tests.

Overall, at the third grade, children in the experimental B program were found to have the highest frequencies in more of the tests than A or C. At grade six, the children in the experimental A program were found to be superior, again in terms of the number of times they came the closest to the professional criterion. The above findings held true when performance in the use of sentence types was included in the total and, also, when such comparisons were excluded.

Of the 36 possible comparisons of sentence types at each grade (12 types at 3 IQ levels) 2 at each grade were found to have 0 frequency; therefore, 34 comparisons were actually involved in the analysis of sentence types. At grade three, the children in program A ranked highest in 13 of the comparisons, followed by C in 11, and B in 10. At grade six, A was superior in 15, C in 11, and B in 8 of the comparisons.

In the subordinate clause analysis: at grade three the children in program B surpassed the others in 8 of the 12 comparisons, followed by the children in A with 3 superior rankings, and the children in C with 1; at grade six, A led with 6, C followed closely with 5, and B was superior in 1 comparison.

The verbal phrase analysis revealed that the children in program A ranked highest at both grades. Because of an absence of scores in one of the 15 possible verbal phrase comparisons, the actual number of tests (comparisons) at grade three became 14. Of the 14, A was superior in 9, B in 4, and C in 1. At grade six, A excelled in 7, and B and C each were superior in 4 of the tests.

When use of adverbial elements was compared, B ranked highest in 19 of the 33 third-grade comparisons, followed by C with 10 and A with 4. At the sixth-grade C had the highest rating in 15, A in 14, and B in 4.

Analysis of the use of prepositional phrases at each IQ level resulted in 3 comparisons at each grade. At grade three, pupils in program B used the most prepositional phrases in 2 cases and the pupils in program C in 1 case. At the sixth grade, C ranked highest in 2 of the comparisons and B in 1.

In the 6 possible comparisons of performance in terms of sentence levels, students in the third-grade A program excelled in 4 of the tests and the students in B excelled in the other 2 tests. At the sixth grade, A and C children were tied with 3 highest rankings each.

Overall, when sentence types were excluded, a total of 68 comparisons were made at the third-grade level and 69 at the sixth-grade level (0 frequencies account for the different number of comparisons). At the third grade, the B group was superior in 35 of the 68 tests, and at the sixth grade the A group was superior in 30 of the 69 tests.

Generally, the results appear to favor the children in the experimental programs; however, a word of caution is in order at this point: The findings presented in this summary were based on rank of performance and therefore, do not reflect the size of the differences. To help clarify the distinction, the following hypothetical illustration is given:

	Group 1	Group 2	Group 3
Test 1	29.8	29.7	29.6
Test 2	22.1	2.4	3.3

In both tests group 1 surpassed the other two groups, therefore group 1 would rank highest in both tests. In the illustration given, the differences found in the results of test 1 are negligible, whereas, in test 2, obvious differences do exist. These differences are lost when rank only is considered.

The above illustration serves to show why it appeared to be imperative that all thirty-five tables of the analysis by IQ level be included in this report. In the eleven preceding tables and the twenty-four in Appendix J, specific differences are revealed for the thirty-five syntactic variables in terms of three IQ levels of the children in the three programs at each of the two grades. It is obvious, with so many factors involved in the analysis, that only the highlights, the most significant findings, could be presented in this discussion.

In view of the fact that, in general, the children in the two experimental programs performed as well as, and possibly better than, the children in the control program, it seems appropriate to conclude that emphasis on children's literature as the "backbone" of the elementary language arts program (as it is in *A Curriculum for English*) is worthy of consideration by all elementary teachers.

PART II. A COMPARISON OF THE SYNTACTIC GROWTH OF CHILDREN IN THREE LANGUAGE ARTS PROGRAMS

The major hypothesis of this study was as follows: There is no significant difference in the rate of syntactic growth of children in Programs A, B, and C. Part II of this chapter is devoted to the findings related to the testing of that hypothesis. Because this research project was designed and carried out specifically to test the above hypothesis, Part II should be considered the most important part of this report. The findings in Part I were presented first in order to establish the "touchstones" or criteria that were used in assessing syntactic growth, i.e., the performance of professional writers. The corpus of sentences written by professional writers was considered vital to the study because it provided a basis for answering this question: How can progress in syntactic performance be determined? Using the professional sample as a standard made the assessment of progress more objective—the analyst was not called upon to make subjective judgments as to what constitutes progress.

To review briefly, the 180 children in this study were enrolled in three different language arts programs: Program A was considered the intensive-treatment program; Program B was the moderate-treatment program; and Program C was the control program in which certain features of Programs A and B were withheld.

The focus in this part of the chapter is on the gain or growth that took place during the time span of one-half a school year. Frequencies were tallied for each of the syntactic variables for both pre- and post-treatment compositions. In effect, the frequency totals then became scores. By subtracting the pre-treatment score from the post-treatment score, it was possible to derive a third score, referred to as frequency gain.

The tables in this section are grouped together according to the syntactic variable or variables being tested: appearing together are the (1) table or tables showing frequency gain scores for grades three and six, (2) table or tables showing levels of significance based on the Wilcoxon test for grades three and six, and (3) in four instances, tables showing analysis of covariance statistics and results for grades three and six.

In order to condense this report as much as possible, gain scores only are shown in the tables in this chapter; the reader will find more comprehensive tables showing pre-, post-, and gain scores in Appendix H. The frequency gain tables were included to permit the reader to note actual differences in group scores. The tables showing the Wilcoxon results reveal significance levels only and do not give an indication of differences in scores.

The Wilcoxon matched-pairs signed-ranks test was used to determine whether gain performance differed significantly in terms of treatment programs. On four selected syntactic variables, analysis of covariance was also used. Formulas for the statistical tests appear in Appendix G.

For each syntactic variable, three comparisons were made using the Wilcoxon test:

1. A was compared to B; therefore, the results show superiority of A over B or B over A.
2. A was compared to C; therefore, results show superiority of A over C or C over A.
3. B was compared to C; therefore, the results show superiority of B over C or C over B.

In the Wilcoxon test, the difference between two groups was found by ranking the scores of individual subjects, members of matched pairs, according to the magnitude of the scores. The Z scores of the Wilcoxon tests were then subjected to a significance test. Only the significance figures appear in tables in this chapter;

the Z scores have been placed in Appendix I.

As in Part I of this chapter, results of the analyses are presented for total groups and for IQ subgroups.

Total Group Comparisons

Observing actual performance seems to be the only means we have of measuring syntactic ability. The fact that a writer does not use a particular syntactic element does not, of course, mean that he does not know how to use it. On the other hand, we have no way of knowing that a particular element is in a writer's repertoire until he uses that element. It does seem, however, that it can logically be assumed that the syntactic elements displayed in written composition do give an indication of the writer's current level of achievement, and also an indication of the kinds of "stock" available in his "warehouse of syntax." As shown in Part I, as a writer grows, syntactically, an increase in the use of certain elements is apparent.

Sentence types. Table XXIX presents frequency-gain scores for groups A, B, and C for each of the twelve sentence types recognized in this study. A positive score indicates an increase or gain in reference to the use of a specific syntactic element; a negative score indicates a decrease in use.

In Table XXIX, the greatest variation appears in the comparison of the score for A at grade three for the 1 2 pattern (41) and the score for C (-40). The A score indicates a sizable positive gain from October to February, whereas the C score indicates a sizable negative "gain."

By referring to Table XXX the reader will find under the A-greater-than-C column that a difference as large as this would occur on a chance basis only one time in a hundred such comparisons; therefore, the groups differ significantly at the .01 level of confidence and the dirrection of the difference is in favor of group A. A double asterisk has been used to indicate significance at the .01 level. Table XXX also reveals that A is superior to B at the .01 level in the use of compound predicates.

At the .05 level of confidence, A was found to be superior to B in the use of the 1 2 4 6 pattern. This means that only five times in a hundred comparisons would a difference as great as the one found have happened merely by chance. The B-greater-than-A column is blank, indicating that group B did not surpass the performance of A on any item in Table XXX.

In the A-C comparison, differences significant at the .05 level appeared in the use of the 1 2 4 pattern and the 1 2B 5A pattern. Group C was superior to A in one instance, T1, but the difference was not significant.

In the B-C comparisons, B was superior in 10 of the 12 comparisons, but in only one case was the difference significant. Group C was superior to B in the use of inverted sentences (.01 level) and compound predicates (.05 level).

The confidence levels most frequently used, .05, .01, and .001, are the ones pointed out in the tables. Actually, the nature of this research was such that confidence levels of .10, .15, or even .20 might justifiably be permitted. Therefore, the reader might wish to note those instances in which figures such as .0594, .0838, and .1190 appear; when one considers the complexity of language, with its seemingly limitless possibilities, one can see that "one out of ten" in the way of odds should probably not be overlooked.

In Table XXXI significance figures are shown for the grade six comparisons of sentence types. While the findings are not so one-sided as those of the third-grade analysis, experimental groups A and B were again found to surpass the control group. Three asterisks appear in the A-B comparison of 1 2P sentences to show that the difference between A and B is so great that, as a chance happening, it would probably occur only once in a thousand times. Overall, however, the differences between A and B are not so great as the differences between A and C or B and C.

In the A-C comparisons, the magnitude of the difference of A over C was found to be significant (.05) in three of the variables, and, in three additional variables the probability figures are small enough to be worthy of attention.

TABLE XXIX

SENTENCE TYPES
FREQUENCY GAIN BETWEEN PRE- AND POST-PERFORMANCE
FOR GROUPS A, B, AND C AT GRADES 3 AND 6
N = 30 For Each Group

Sentence Type	Grade 3 A	Grade 3 B	Grade 3 C	Grade 6 A	Grade 6 B	Grade 6 C
1 2	41	24	-40	12	12	17
1 2 4	63	22	8	49	33	- 6
1 2 3 4	5	2	- 1	- 8	-12	- 2
1 2 4 6	6	0	- 4	0	1	- 1
1 2 4 6A	1	0	0	0	0	- 3
1 2B 5	24	11	4	22	9	-19
1 2B 5A	12	9	-12	15	- 7	-15
1 2P	10	0	- 1	6	2	-23
T1	2	5	8	-18	- 2	- 3
Inverted Sentences	4	- 6	- 3	2	- 1	2
Questions	8	6	0	5	5	- 8
Compound Predicates	20	- 5	1	7	22	11

TABLE XXX

SENTENCE TYPES
COMPARISON BETWEEN GROUPS USING THE WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST AT GRADE 3

N = 30 For Each Group

Sentence Type	A > B p	B > A p	A > C p	C > A p	B > C p	C > B p
1 2	.2676		**.0096		.0838	
1 2 4	.0934		*.0495		.2296	
1 2 3 4	.2177		.1112		.2451	
1 2 4 6	*.0344		.3594		*.0548	
1 2 4 6A[a]	----		----		----	
1 2B 5	.2148		.1190		.2877	
1 2B 5A	.4052		*.0202		.0594	
1 2P	.3372		.2877		.3409	
T1	.3446			.2709		.2946
Inverted Sentences	.1660		.1762			**.0055
W (Questions)	.3372		.1492		.2643	
Compound Predicates	**.0096		.0681			*.0174

a Comparison impossible because of infrequency of use

* Significant at the .05 level

** Significant at the .01 level

TABLE XXXI

SENTENCE TYPES
COMPARISON BETWEEN GROUPS USING THE WILCOXON MATCHED-PAIRS SIGNED-RANK TEST AT GRADE 6

N = 30 For Each Group

Sentence Type	A > B p	B > A p	A > C p	C > A p	B > C p	C > B p
1 2		.4840		.4522		.3483
1 2 4		.3336	.0764		.2546	
1 2 3 4	.2877			.2578		.0951
1 2 4 6		.3409	.4562		.1020	
1 2 4 6A	no difference		*.0392		*.0548	
1 2B 5		.4013	.0694		.0681	
1 2B 5A	.3369		*.0537		.2546	
1 2P	***.0009		*.0307		.2327	
T1		*.0401		*.0256	.4602	
Inverted Sentences	.3228		no difference			.4761
W (Questions)	.3974		.1446		.1788	
Compound Predicates		*.0375		.3632	.2420	

* Significant at the .05 level

** Significant at the .01 level

*** Significant at the .001 level

Subordinate clauses. Table XXXII shows the gains made by the three groups in the use of subordinate clauses. Group A made greater gains at both grades than B or C. The total score for B at grade six shows a decrease of approximately the same magnitude as the increase shown for group A at grade three. The greatest increase, excluding totals, was found in the 6A's use of adverbial clauses.

Tables XXXIII and XXXIV present the results of the Wilcoxon tests for subordinate clause differences at grades three and six. The most significant difference (.001 level) is found between A and C in total subordinate clauses at grade three, with A as the favored group; at the .01 level of confidence, group A was superior to C in both adverb and noun clauses. At grade six, at the .01 level, it was B over C in the use of adverbial clauses and total clauses. At grade three, groups A and B show the least divergence, but at grade six the opposite is true. The 6B group was outperformed by the other two groups in each of the four clause variables. At grade six, the blank columns in the tables emphasize the fact that it was A over B, A over C, and C over B without exception.

Tables XXXVA and B and XXXVIA and B show the results of the analysis of covariance for subordinate clauses. This test and the Wilcoxon were both used to determine whether the difference in the gains of the groups were significant. The tests differ in that the analysis of covariance compares all three groups simultaneously, and also, adjusts the gain scores in terms of the influence of initial performance, i.e., the performance in the pre-treatment composition. In the table designated as A, the sums of squares and cross-products are given; the B table shows the summary of the analysis and gives the F test results.

Table XXXVB shows that, in terms of total subordinate clause gains, the third-grade groups are significantly different beyond the .05 level. At the sixth grade, Table XXXVIB reveals that the groups differ even more—that confidence can be placed in the results to the extent that the groups would probably differ in 99 of each 100 repeated comparisons. The blank columns in the table of Wilcoxon results indicated the same thing, i.e., that the groups were very dissimilar in subordinate clause gain.

TABLE XXXII

SUBORDINATE CLAUSES
FREQUENCY GAIN BETWEEN PRE- AND POST-PERFORMANCE
FOR GROUPS A, B, AND C AT GRADES 3 AND 6

N = 30 For Each Group

Subordinate Clause	Grade 3			Grade 6		
	A	B	C	A	B	C
Adverb	26	33	-13	30	-11	-4
Adjective	5	-1	2	7	-11	5
Noun	27	15	1	12	-29	5
Total	58	47	-10	49	-51	6

TABLE XXXIII

SUBORDINATE CLAUSES
COMPARISON BETWEEN GROUPS USING THE WILCOXON MATCHED-PAIRS SIGNED-RANK TEST
AT GRADE 3

N = 30 For Each Group

Subordinate Clauses	A > B p	B > A p	A > C p	C > A p	B > C p	C > B p
Adverb		.3228	**.0073		**.0005	
Adjective	.1539		.2061			.3156
Noun	.1131		**.0040			.3707
Total	.0606		***.0010		**.0021	

** Significant at the .01 level

*** Significant at the .001 level

TABLE XXXIV

SUBORDINATE CLAUSES
COMPARISON BETWEEN GROUPS USING THE WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST
AT GRADE 6

N = 30 For Each Group

Subordinate Clauses	A > B p	B > A p	A > C p	C > A p	B > C p	C > B p
Adverb	*.0571		*.0359			.3409
Adjective	.2119		.4247			.2148
Noun	*.0401		.4129			.1271
Total	**.0024		.1093			.0582

* Significant at the .05 level

** Significant at the .01 level

TABLE XXXV A

TOTAL SUBORDINATE CLAUSES ANALYSIS OF COVARIANCE FOR GROUPS, A, B, AND C AT GRADE 3

N = 30 For Each Group

Group	Sums of Squares Pre	 Post	Sums of Cross Products
A	111.86	143.20	50.80
B	208.96	881.46	299.53
C	180.16	168.16	77.83
Within	500.98	1192.82	428.16
Between	35.48	10.82	-19.54
Total	536.46	1203.64	408.62

TABLE XXXV B

SUMMARY OF THE COVARIANCE ANALYSIS

Source of Variation	Sum of Squares	d.f.	Mean Square	F
S_5: Treatment	65.51	2	32.75	3.40*
S_2: Error	826.91	86	9.61	
S_4: Total	892.42			

* F significant beyond .05 level (p = 3.10)

TABLE XXXVI A

TOTAL SUBORDINATE CLAUSES
ANALYSIS OF COVARIANCE
FOR GROUPS A, B, AND C
AT GRADE 6

N = 30 For Each Group

Group	Sums of Squares Pre	 Post	Sums of Cross Products
A	530.96	574.66	320.33
B	492.70	326.80	170.60
C	608.80	526.00	275.00
Within	1632.46	1427.46	765.93
Between	14.15	203.02	24.71
Total	1646.61	1630.48	790.64

TABLE XXXVI B

SUMMARY OF THE COVARIANCE ANALYSIS

Source of Variation	Sum of Squares	d.f.	Mean Square	F
S_5: Treatment	182.75	2	91.37	7.35**
S_2: Error	1068.10	86	12.42	
S_4: Total	1250.85			

** F significant beyond .01 level (p = 4.85)

Verbal phrases. The gain table for verbal phrases, Table XXXVII, reveals a negative gain for four of the six groups, and a zero "gain" for one group, in the use of infinitives. Only the 3A group exceeded their earlier performance.
In total verbal phrases, gains were shown for the A group at both grades and for the C group at grade six.

TABLE XXXVII

VERBAL PHRASES
FREQUENCY GAIN BETWEEN PRE- AND POST-PERFORMANCE
FOR GROUPS A, B, AND C AT GRADES 3 AND 6

N = 30 For Each Group

Verbal Phrases	Grade 3			Grade 6		
	A	B	C	A	B	C
Infinitive	17	-16	-12	-4	-10	0
Gerund	5	0	1	13	0	2
Present Participle	1	1	0	16	-6	8
Past Participle	2	3	-4	8	4	4
Total	25	-12	-15	33	-12	14

Tables XXVIII and XXXIX present the results of the Wilcoxon tests. A was found to be definitely superior to B and C at both grades, and in many cases, the difference was significant beyond the .01 level. At the third grade, the difference between A and C was significant beyond the .001 level for total verbal phrase gain. The blank column in the sixth-grade results indicates that B was surpassed by A in every case. A and C were very similar in the use made of

TABLE XXXVIII

VERBAL PHRASES
COMPARISONS BETWEEN GROUPS USING THE WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST
AT GRADE 3

Verbal Phrases	$A > B$ p	$B > A$ p	$A > C$ p	$C > A$ p	$B > C$ p	$C > B$ p
Infinitive	**.0044		**.0069			.2981
Gerund	**.0023		.1635			.1814
Present Participle	.1190		.3745			.3594
Past Participle		.3745	.0838		.0618	
Total	**.0054		***.0007		.3409	

** Significant at the .01 level

*** Significant at the .001 level

infinitives (no gain or a slight decrease); otherwise, A dominated in the A-C contest. In the B-C comparisons, C was superior in four of the five verbal phrase variables, and in one case, the groups were very similar. In the analysis of covariance test for total verbal phrases, Tables XL and XLI, the third-grade groups differed significantly, at the .01 level, but the differences found at the sixth grade level were not significant.

TABLE XXXIX

VERBAL PHRASES
COMPARISONS BETWEEN GROUPS USING THE WILCOXON
MATCHED-PAIRS SIGNED-RANKS TEST
AT GRADE 6

Verbal Phrases	A > B p	B > A p	A > C p	C > A p	B > C p	C > B p
Infinitive	.3520			.4443		.2843
Gerund	*.0351		.1814			.3974
Present Participle	**.0125		.2206			**.0075
Past Participle	.2743		.2033		.4522	
Total	*.0392		.1539			.1711

* Significant at the .05 level

** Significant at the .01 level

TABLE XL A

TOTAL VERBAL PHRASES
ANALYSIS OF COVARIANCE
FOR GROUPS A, B, AND C
AT GRADE 3

Group	Sums of Squares		Sums of Cross Products
	Pre	Post	
A	20.80	57.46	.20
B	48.80	28.80	13.20
C	90.80	42.66	19.00
Within	160.40	128.92	32.40
Between	3.19	13.06	-6.40
Total	163.59	142.98	26.00

TABLE XL B

SUMMARY OF THE COVARIANCE ANALYSIS

Source of Variation	Sum of Squares	d.f.	Mean Square	F
S_5: Treatments	15.47	2	7.73	5.43**
S_2: Error	122.38	86	1.41	
S_4: Total	137.85			

** F significant beyond .01 level (p. = 4.85)

TABLE XLI A

TOTAL VERBAL PHRASES ANALYSIS OF COVARIANCE FOR GROUPS A, B, AND C AT GRADE 6

Group	Sums of Squares Pre	 Post	Sums of Cross Products
A	167.86	252.16	25.66
B	120.16	161.36	7.16
C	140.16	276.96	55.83
Within	428.18	690.48	88.65
Between	.19	29.95	-1.93
Total	428.37	720.43	86.72

TABLE XLI B

SUMMARY OF THE COVARIANCE ANALYSIS

Source of Variation	Sum of Squares	d.f.	Mean Square	F
S[illegible]: Treatment	30.75	2	15.37	1.96
S_2: Error	672.13	86	7.81	
S_4: Total	702.88			

F not significant

Adverbials. In Tables XLII, XLIII, XLIV, XLV, and XLVI, information is presented concerning the gains made by the groups in the use of adverbial elements. Several negative scores are shown for the C group at grade three and for the B group at grade six. At both grades, group A experienced a decrease in only one instance.

According to the Wilcoxon test, the most significant differences appear in the comparisons of A with C, and B with C at grade three. The experimental groups A and B made higher gains than C in most of the variables, often at the .01 level and sometimes at the .001 level.

At grade six, A was superior to both B and C. The B group experienced a decline, and, overall, showed less improvement than C. The differences in the B-C comparisons, however, were significant in only two instances, once in favor of B (.05) and once in favor of C (.01).

In the analysis of covariance for total adverbials, the difference between the third-grade groups was significant beyond the .05 level. At the sixth grade, the difference was not significant when the influence of the pre-treatment composition scores was taken into consideration.

TABLE XLII

ADVERBIALS
FREQUENCY GAIN BETWEEN PRE- AND POST-PERFORMANCE FOR GROUPS A, B, AND C AT GRADES 3 AND 6
N = 30 For Each Group

Adverbials	Grade 3			Grade 6		
	A	B	C	A	B	C
M1	43	52	-15	13	25	-19
M2, M3	2	5	16	14	5	18
M4	13	4	4	11	3	1
M5	21	22	-37	12	-34	1
Total M's	79	83	-32	50	- 1	1
F1, F2, F3	4	- 7	5	- 1	- 9	9
F4	40	43	-39	49	-20	39
F5	36	10	12	17	20	1
Total F's	80	46	-22	65	- 9	49
Total M, F	159	129	-54	115	-10	50
Total M4, M5, F4, F5	110	79	-60	89	-31	42

TABLE XLIII

ADVERBIALS
COMPARISONS BETWEEN GROUPS USING THE WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST AT GRADE 3

Adverbials	A > B p	B > A p	A > C p	C > A p	B > C p	C > B p
M1		.3228	.0885		**.0091	
M2, M3		.4522		*.0392		.0901
M4	.2119		.1423			.4920
M5		.3936	**.0075		**.0021	
Total M		.3897	**.0020		***.0012	
F1, F2, F3	.2119			.4052		.0694
F4	.4443		**.0119		*.0516	
F5	*.0170		.0694		.2483	
Total F	.0901		**.0048		.0823	
Total M, F	.2578		***.0011		**.0023	
Total M4, M5 F4, F5	.2033		***.0005		**.0043	

* Significant at the .05 level

** Significant at the .01 level

*** Significant at the .001 level

TABLE XLIV

ADVERBIALS
COMPARISONS BETWEEN GROUPS USING THE WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST
AT GRADE 6

Adverbials	A > B p	B > A p	A > C p	C > A p	B > C p	C > B p
M1		.3085	.1020		*.0409	
M2, M3	.2546			.4090		.1814
M4	.3050		.1977		.4761	
M5	*.0475			.4641		.0951
Total M	.0655		*.0256			.4920
F1, F2, F3	.1492			.1170		**.0119
F4	.1335			.4443		.0838
F5	.4325		.2843		.2090	
Total F	*.0375		.4920			.1131
Total M, F	.0838		.3336			.3372
Total M4, M5 F4, F5	.0985		.3085			.2643

* Significant at the .05 level

** Significant at the .01 level

TABLE XLV A

TOTAL ADVERBIALS
ANALYSIS OF COVARIANCE
FOR GROUPS A, B, AND C AT GRADE 3

Group	Sums of Squares Pre	Sums of Squares Post	Sums of Cross Products
A	1019.46	2933.46	659.53
B	1056.30	1791.20	855.60
C	2377.86	1045.86	899.46
Within	4453.62	5770.52	2414.59
Between	435.26	79.02	- 183.26
Total	4888.88	5849.54	2231.33

TABLE XLV B

SUMMARY OF THE COVARIANCE ANALYSIS

Source of Variation	Sum of Squares	d.f.	Mean Square	F
S_5: Treatments	369.73	2	184.86	3.56*
S_2: Error	4461.42	86	51.87	
S_4: Total	4831.15	88		

* F significant beyond .05 level (p = 3.10)

TABLE XLVI A

TOTAL ADVERBIALS ANALYSIS OF COVARIANCE FOR GROUPS A, B, AND C AT GRADE 6

Group	Sums of Squares Pre	Sums of Squares Post	Sums of Cross Products
A	2924.80	4219.86	1652.60
B	2805.86	4370.30	1816.60
C	2297.36	3747.36	823.36
Within	8028.02	12337.52	4292.56
Between	108.95	326.42	107.45
Total	8136.97	12663.94	4400.01

TABLE XLVI B

SUMMARY OF THE COVARIANCE ANALYSIS

Source of Variation	Sum of Squares	d.f.	Mean Square	F
S_5: Treatments	242.36	2	121.18	1.03
S_2: Error	10042.30	86	116.77	
S_4: Total	10284.66			

F not significant

Prepositional phrases. As shown in Table XLVII, all groups at both grades experienced a gain in the use made of prepositional phrases. The gain of the sixth-grade A group was almost double that of the third-grade A group. The gain for the pupils in the B group at the third grade was much greater than the gain shown by the B Group at sixth grade. With the C groups, the reverse was found; the increase shown by the 6C group was greater than that shown by the 3C group.

The Wilcoxon results for both grades are given in Table XLVIII. Again, the A group was unsurpassed at both grades. The differences at the third grade were not significant, but at the sixth grade, it was A over B at the .01 level and A over C at the .05 level.

Group B at the third grade used more prepositional phrases than C, but the difference was not significant. At the sixth-grade level, it was C over B, but again, the difference was not significant.

An analysis of covariance was not made for the prepositional phrase variable. Only four variables were selected for analysis by the covariance method: total subordinate clauses, total verbal phrases, total adverbials, and T-units of level four or higher complexity.

TABLE XLVII

PREPOSITIONAL PHRASES
FREQUENCY GAIN BETWEEN PRE- AND POST- PERFORMANCE
FOR GROUPS A, B, AND C AT GRADES 3 AND 6
N=30 For Each Group

Syntactic Item	Grade 3			Grade 6		
	A	B	C	A	B	C
Total Prepositional Phrases	67	52	17	112	3	25

TABLE XLVIII

PREPOSITIONAL PHRASES
COMPARISONS BETWEEN GROUPS USING THE WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST AT GRADES 3 AND 6

Prepositional Phrase	A B p	B A p	A C p	C A p	B C p	C B p
Grade 3	.4013		.2206		.3192	
Grade 6	**.0037		*.0548			.3936

* Significant at the .05 level

** Significant at the .01 level

Sentence levels. Table XLIX presents the gains for groups at both grades in the use made of sentences of three or more levels and four or more levels. The A group, once more, was the favored group at grade three and at grade six.

Table L gives the Wilcoxon results and the two columns that are blank emphasize the fact that the A group at both grades was significantly superior to

TABLE XLIX

SENTENCE LEVELS
FREQUENCY GAIN BETWEEN PRE- AND POST- PERFORMANCE FOR GROUPS A, B, AND C AT GRADES 3 AND 6

N=30 For Each Group

T-units	Grade 3			Grade 6		
	A	B	C	A	B	C
Level 3 and Higher	55	21	-15	48	-29	-1
Level 4 and Higher	11	-3	0	40	-20	4

B and C. In the level four-and-higher comparisons, a difference at the .001 level of significance was found for A over B, and a difference at the .01 level for C over B. Analysis of covariance results, Tables LI and LII, show the third-grade sentence-level differences to be less pronounced than the differences for the sixth-grade groups, the latter being significant beyond the .01 level.

TABLE L

SENTENCE LEVELS
COMPARISONS BETWEEN GROUPS USING THE WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST AT GRADES 3 AND 6

T-units	A B p	B A p	A C p	C A p	B C p	C B p
Grade 3						
Level 3 and Higher	.1020		**.0029		.1292	
Level 4 and Higher	*.0375		.0681			.4721
Grade 6						
Level 3 and Higher	**.0068		*.0322			.2451
Level 4 and Higher	***.0014		*.0465			**.0040

* Significant at the .05 level

** Significant at the .01 level

*** Significant at the .001 level

TABLE LI A

T-UNITS--LEVEL 4 AND HIGHER
ANALYSIS OF COVARIANCE
FOR GROUPS A, B, AND C
AT GRADE 3

Group	Sums of Squares Pre	Sums of Squares Post	Sums of Cross Products
A	19.36	25.86	5.13
B	28.16	21.86	13.66
C	29.86	19.86	.13
Within	77.38	67.58	18.92
Between	1.08	.80	- .86
Total	78.46	68.38	18.06

TABLE LI B

SUMMARY OF THE COVARIANCE ANALYSIS

Source of Variation	Sum of Squares	d.f.	Mean Square	F
S_5: Treatments	1.26	2	.63	.86
S_2: Error	63.09	86	.73	
S_4: Total	64.35			

F not significant

TABLE LII A

T-UNITS--LEVEL 4 AND HIGHER
ANALYSIS OF COVARIANCE
FOR GROUPS A, B, AND C
AT GRADE 6

Group	Sums of Squares Pre	Sums of Squares Post	Sums of Cross Products
A	94.30	206.96	54.30
B	137.46	72.80	36.80
C	141.50	134.96	43.50
Within	373.26	414.72	134.60
Between	21.62	41.08	.95
Total	394.88	455.80	135.55

TABLE LII B

SUMMARY OF THE COVARIANCE ANALYSIS

Source of Variation	Sum of Squares	d.f.	Mean Square	F
S_5: Treatments	43.09	2	21.54	5.06**
S_2: Error	366.19	86	4.25	
S_4: Total	409.28			

** F significant beyond .01 level (p = 4.85)

Summary. Following is a summary of the Wilcoxon results in the comparisons of groups A, B, and C at grades three and six. The results for the third grade are presented first.

Grade 3

A superior to B

At the .05 level of significance, A was superior to B in the gain shown in the following:

1 2 4 6 pattern
Compound predicates
Infinitive phrases
Gerund phrases
Total verbal phrases
F5 adverbials
Level 4 and higher

At the .01 level of significance, A surpassed B in the following:

Compound predicates
Infinitive phrases
Gerund phrases
Total verbal phrases

B superior to A

There were no instances of superiority of B over A.

A superior to C

At the .05 level of significance, A was superior to C in the gain shown in thirteen comparisons:

1 2 pattern
1 2 4 pattern
1 2B 5A pattern
Infinitive phrases
Total verbal phrases
M5's
Total M's
F4's
Adverb clauses
Noun clauses
Total subordinate clauses
Total F's
Total M4, M5, F4, and F5's
Total M's and F's
Level 3 and higher

At the .01 level of significance, A surpassed C in the following:

1 2 pattern
Adverb clauses
Noun clauses
Total subordinate clauses
Infinitive phrases
Total verbal phrases
M5's
Total M's
F4's
Total F's
Total M4, M5, F4, and F5's
Total M's and F's
Level 3 and higher

At the .001 level, the gains of A were greater than C for:

Total subordinate clauses
Total verbal phrases
Total M's and F's
Total M4, M5, F4, and F5's

C superior to A

There was only one instance of C surpassing the gains of A at the .05 level:

M2 and M3's

There were no instances of C over A at the .01 or .001 levels.

B superior to C

Group B superiority over C at the third grade occurred in the following at the .05 level:

1 2 4 6 pattern
Adverb clauses
Total subordinate clauses
M[illegible]'s
Total M's
F4's
Total M's
Total M's and F's
M4, M5, F4, and F5's

At the .01 level, B was superior to C in the gains for:

Total subordinate clauses
Adverb clauses
Total M's
F4's

M1's

M5's

Total M's and F's

B surpassed C at the .001 level in the gain shown in the use of Total M's.

C superior to B

At the .05 level, C was superior to B in the gains shown for inverted sentences and compound predicates. At the .01 level, inverted sentences was the only element showing C over B significance

Following is a summary of the Wilcoxon results for the sixth-grade groups.

Grade 6

A superior to B

At grade 6, superiority of performance of A over B at the .05 level occurred in the following comparisons:

1 2P pattern

Adverb clauses

Noun clauses

Total subordinate clauses

Gerund phrases

Present participles

Total verbal phrases

M5's

Total F's

Prepositional phrases

Level 3 and higher

Level 4 and higher

At the .01 level, A was superior to B in the following:

1 2P pattern

Total subordinate clauses

Present participles

Prepositional phrases

Level 3 and higher

Level 4 and higher

At the .001 level of significance, A surpassed B in gains shown for:

1 2P pattern

Level 4 and higher

B superior to A

At the sixth grade, B was superior to A at the .05 level for gains in:

T1 pattern

Compound predicates

There were no instances of B over A at the .01 or .001 levels.

A superior to C

At the .05 level of confidence, A surpassed the performance of C in the following:

1 2 4 6A pattern

1 2B 5A pattern

1 2P pattern

Adverb clauses

Total M's

Prepositional phrases

Level 3 and higher

Level 4 and higher

There were no significant differences found at the .01 and .001 levels.

C superior to A

C was not significantly superior to A in any of the comparisons.

B superior to C

At grade six B was superior to C at the .05 level in two comparisons:

1 2 4 6A pattern

M1's

There were no significant differences for B over C at the .01 or .001 levels.

C superior to B

At grade six, C was superior to B at the .05 level in these comparisons:

Present participles

F1, F2, and F3's

Level 4 and higher

The same three comparisons were significant at the .01 level also. There were no instances of C over A at the .001 level.

In the third-grade comparisons, the gains shown by the children in Program A were definitely superior to those shown by the children in Program B. The differences were even more pronounced in the comparison of groups A and C, with the children in Program A far surpassing the gains made by the children in Program C.

The initial performance of the children in Program A, i.e., the performance in the pre-treatment composition, was inferior to the performances of their matched mates in Program B. and C. In the pre-treatment session, writing appeared to be a very laborious task for the third-grade Program A children. They had to make a great deal of progress during the semester just to fill the gap that existed between their scores and those of children in Programs B and C. This they did, and even more.

The growth "spurt" evidenced by the third-grade Program A children could almost be considered phenomenal. The B and C groups might have previously experienced their growth "spurts"--they might have been in the midst of a "plateau" period during the half-year experiment. At any rate, the Program A children lagged behind the B and C groups in the pre-treatment performance, and later, surpassed both groups in the syntactic gains made during the semester.

Can the wide differences in growth at the third-grade level be explained by the "spurt vs plateau" theory or can the Program A intensive-treatment take the credit for the spectacular gains? Or were unknown influences at work? A definite answer cannot be given, but the evidence clearly suggests that Program A contained the right "ingredients" to allow a below-average class of third-grade children to grow syntactically at a highly desirable and unexpected rate.

The third-grade children in Program B, the moderate-treatment program, were also decidedly superior to the children in the control program in regard to the syntactic growth made during the half-year. The superior gains made by both experimental groups at grade three cannot be ignored--the evidence does not permit only a modest endorsement of Programs A and B. Both the Wilcoxon and the analysis of covariance tests indicate that the gains didn't just happen by chance. The null hypothesis was rejected time after time--there were differences, and sizable ones.

At grade six, as at grade three, the gains made by the children in Program A were considerably greater than the gains made by children in Programs B or C. The differences between B and C were less pronounced. In several instances, actual gain scores favored C over B, but the differences were significant in only three cases; B was significantly superior to C in two instances. Statistically, the sixth-grade B and C gains were found to be comparable, but the evidence in favor of the children in the intensive-treatment Program A, as before, is too great to be disregarded. The intensive-treatment programs at grade three and six appeared to pay big dividends. Unexplained forces may have been at work, but the evidence at hand at the present time points to the superiority of the intensive-treatment program. The null hypothesis must also be rejected at grade six in the overall comparison of A and B, and in the overall comparison of A and C. Differences were found, and they were significant differences.

IQ Subgroup Comparisons

The findings presented in this section are based on the performance of IQ subgroups of groups A, B, and C. Each group at each grade level was divided into equal thirds, making an N of 10 for each subgroup.

As pointed out earlier, the third-grade and sixth-grade groups are not directly comparable in regard to IQ scores; thus, the high, middle, and low designations are relative. The third-grade groups represent below-average classes while the sixth-grade groups represent classes of above-average intelligence; therefore, the low IQ sixth-grade children are considerably above the low IQ third-grade children in total intelligence; in fact, they are more directly comparable to the children of the middle IQ category at third grade. Within each grade, however, the children in the subgroups are closely matched--the matched "triplets" make the subgroup comparisons as fair as possible.

It was thought that the subgroup analysis would provide data of value even though the small number in each subgroup reduced the chances for significant differences to appear. The main objective was to provide information concerning general trends.

Sentence types. All of the preceding analyses of sentence types were based on the frequency of occurrence of individual sentence patterns or types. A different kind of information is presented in Table LIII--the gain shown in the number of different sentence types used. For example, if a child used only 3 different patterns in the pre-treatment composition and later used 4 different patterns in the post-treatment composition, he was credited with a gain score of 1. The data shown in Table LIII refer to the gains made by the IQ subgroups of A, B, and C.

TABLE LIII

DIFFERENT SENTENCE TYPES USED
FREQUENCY GAIN BETWEEN PRE- AND POST-PERFORMANCE
BY IQ SUBGROUPS OF GROUPS A, B, AND C
AT GRADES 3 AND 6

N = 10 For Each Subgroup

Different Sentence Types Used	A			B			C		
	Hi	Mid	Lo	Hi	Mid	Lo	Hi	Mid	Lo
Grade 3	4	13	14	-7	4	6	1	9	6
Grade 6	4	-7	-2	-6	-1	3	0	-8	1

The middle and low IQ subgroups of A at grade three were the ones showing the highest gain, i.e., they used more varieties of sentence types in the post-compositions than in the pre-compositions. More positive scores were found at the third grade than at the sixth grade. This may indicate that the third-grade children were doing more experimenting with patterns than were the sixth-grade children. As shown in Table LIII, several of the groups used fewer varieties, and therefore, received negative scores.

Table LIV reveals that the differences between subgroups were not significant; however, in a few cases, the figures approach the .05 level of significance.

TABLE LIV

DIFFERENT SENTENCE TYPES USED
IQ SUBGROUP COMPARISONS USING THE WILCOXON
MATCHED-PAIRS SIGNED-RANKS TEST
AT GRADES 3 AND 6

Different Sentence Types Used	Significance					
	A > B	B > A	A > C	C > A	B > C	C > B
Grade 3						
High	.0735		.1020			.2420
Middle	.1867		.2981			.1814
Low	.2005		.1170			.4286
Grade 6						
High	.0694		.4522			.2005
Middle		.2981		.4761	.1788	
Low		.2912		.4286	.4286	

Subordinate clauses. Tables LV and LVI present the gain scores for the subordinate clause analysis. Only subordinate clause totals were used in the Wilcoxon analysis by IQ subgroup. The same procedure, that of using totals only, was followed for all of the IQ subgroup comparisons.

One might expect the highest scores to appear in the high IQ subgroups at grade six, but such was not the case. The highest gains were made by the 3A low

TABLE LV

SUBORDINATE CLAUSES
FREQUENCY GAIN BETWEEN PRE- AND POST-PERFORMANCE BY IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADE 3

N = 10 for Each Subgroup

Subordinate Clauses	A			B			C		
	Hi	Mid	Lo	Hi	Mid	Lo	Hi	Mid	Lo
Adverb	7	8	11	11	7	15	-6	-1	-6
Adjective	1	2	2	5	-2	-4	-1	2	1
Noun	5	10	12	10	3	2	-5	8	-2
Total	13	20	25	26	8	13	-12	9	-7

TABLE LVI

SUBORDINATE CLAUSES
FREQUENCY GAIN BETWEEN PRE- AND POST-PERFORMANCE BY IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADE 6

N = 10 for Each Subgroup

Subordinate Clauses	A			B			C		
	Hi	Mid	Lo	Hi	Mid	Lo	Hi	Mid	Lo
Adverb	1	17	12	8	-11	-8	6	-9	-1
Adjective	2	2	3	-1	-4	-6	6	-9	8
Noun	5	-1	8	-13	-8	-8	3	-12	14
Total	8	18	23	-6	-23	-22	15	-30	21

IQ and the 3B high IQ children. The 6C middle IQs and the 6B middle IQs showed the greatest negative gain (decrease).

Table LVII presents the significance values for the subordinate clause comparisons. The differences were found to be significant in five instances, and in four of the five, the differences favored the experimental subgroups. In the Wilcoxon test, gains made by the high IQ children of the 3A and 3B subgroups were found to be more similar than those found in any other comparison (.4443 significance, which indicates only a slight difference between groups). Interestingly, the gain table, LV shows the gains for these two subgroups to be quite

TABLE LVII

TOTAL SUBORDINATE CLAUSES
IQ SUBGROUP COMPARISONS USING THE WILCOXON
MATCHED-PAIRS SIGNED-RANKS TEST
AT GRADES 3 AND 6

Total Subordinate Clauses	Significance					
	A > B	B > A	A > C	C > A	B > C	C > B
Grade 3						
High	.4443		**.0038		**.0122	
Middle	.1056		.2005		.2981	
Low	.2206		.0125		**.0150	
Grade 6						
High	.2709		.2546			.1190
Middle	.0183		.0256		.3121	
Low	**.0064		.3897			**.0110

*Significant at the .05 level

**Significant at the .01 level

different. A check of individual scores revealed that one extremely high score for one child accounted for the difference in the subgroup frequency gains. In the Wilcoxon test, the performance of a single child cannot influence the results to such a degree. Except for the performance of the one child, the groups were very similar in frequency gain.

Verbal phrases. The verbal phrase gain scores for grades three and six are presented in Tables LVIII and LVIX. In terms of total verbal phrases, none of the A subgroups at either grade experienced a decline; such was not the case for the subgroups of B and C.

At grade three, the high A subgroup experienced the highest positive gain in verbal phrases and the high C subgroup ranked lowest in gain. At grade six, the low A subgroup ranked highest and the low B subgroup ranked lowest.

TABLE LVIII

VERBAL PHRASES
FREQUENCY GAIN BETWEEN PRE- AND POST-PERFORMANCE
BY IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADE 3

N = 10 for Each Subgroup

Verbal Phrases	A			B			C		
	Hi	Mid	Lo	Hi	Mid	Lo	Hi	Mid	Lo
Infinitive	2	6	9	-3	-8	-5	-16	1	3
Gerund	4	1	0	0	1	-1	0	2	-1
Present Participle	2	0	-1	1	-1	1	0	0	0
Past Participle	1	1	0	1	0	2	-1	-2	-1
Total	9	8	8	-1	-8	-3	-17	1	1

TABLE LIX

VERBAL PHRASES
FREQUENCY GAIN BETWEEN PRE- AND POST-PERFORMANCE BY IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADE 6

N = 10 for Each Subgroup

Verbal Phrases	A			B			C		
	Hi	Mid	Lo	Hi	Mid	Lo	Hi	Mid	Lo
Infinitive	-6	9	-7	0	2	-12	3	-10	7
Gerund	4	0	9	1	2	-3	0	0	2
Present Participle	1	4	11	0	-4	-2	5	0	3
Past Participle	2	2	4	3	1	0	3	1	0
Total	1	15	17	4	1	-17	11	-9	12

Table LX gives the Wilcoxon results for the verbal phrase comparisons. Of the six significant differences, two were found at each of the three IQ levels. The A subgroups were superior to B and C, and the C subgroups were favored in two of the three significant B-C comparisons.

TABLE LX

TOTAL VERBAL PHRASES
IQ SUBGROUP COMPARISONS USING THE WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST AT GRADES 3 AND 6

Total Verbal Phrases	Significance					
	A > B	B > A	A > C	C > A	B > C	C > B
Grade 3						
High	.1038		**.0026		*.0212	
Middle	**.0054		.1562			*.0344
Low	.1314		.1075			.2877
Grade 6						
High	.4052			.3409		.4286
Middle	.1788		.0764		.1814	
Low	*.0162		.2578			**.0034

*Significant at the .05 level

**Significant at the .01 level

Adverbials. Tables LXI and LXII present the frequency gain scores for subgroup performances in the use of adverbial elements. The Wilcoxon results are given in Tables LXIII and LXIV.

Table LXI reveals that subgroups of C at third grade experienced more decreases than the combined subgroups of A and B. At the sixth-grade level, as shown in Table LXII, the A subgroups again produced the fewest negative scores. The 6B subgroups had more decreases than 6C, but the 6C losses were of greater magnitude. Overall, the scores were found to fluctuate a great deal; they revealed no clear-cut evidence of the supremacy of high, middle, or low IQ children.

The Wilcoxon results in Table LXIII indicate the superiority of A over C at both grade levels. The differences at the third grade are more pronounced, with the high, middle, and low subgroups of A each outperforming their matched subgroup of C. The B groups were found to be superior to C at the third grade, but they were slightly outmatched by the C subgroups at grade six. In general, the A and B subgroups were superior to C in the gains shown in the use of adverbial elements.

TABLE LXI

ADVERBIALS
FREQUENCY GAIN BETWEEN PRE- AND POST-PERFORMANCE
BY IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADE 3

N = 10 for Each Subgroup

Adverbials	A			B			C		
	Hi	Mid	Lo	Hi	Mid	Lo	Hi	Mid	Lo
M1	16	22	5	15	25	12	4	-5	-14
M2, M3	2	1	-1	1	3	1	9	6	1
M4	-1	6	8	3	1	0	-4	4	4
M5	11	3	7	-1	9	14	-24	2	-15
Total M	28	32	19	18	38	27	-15	7	-24
F1, F2, F3	0	1	3	0	-3	-4	3	1	1
F4	32	23	-15	27	-5	21	-35	6	-10
F5	15	14	7	3	3	4	8	5	-1
Total F	47	38	-5	30	-5	21	-24	12	-10
Total M, F	75	70	14	48	33	48	-39	19	-34
Total M4, M5 F4, F5	57	46	7	32	8	39	-55	17	-22

TABLE LXII

ADVERBIALS
FREQUENCY GAIN BETWEEN PRE- AND POST-PERFORMANCE BY IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADE 6

N = 10 For Each Subgroup

Adverbials	A			B			C		
	Hi	Mid	Lo	Hi	Mid	Lo	Hi	Mid	Lo
M1	2	11	0	12	0	13	-10	-13	4
M2, M3	4	0	10	7	0	-2	9	5	4
M4	2	4	5	5	1	-3	9	-5	-3
M5	-15	10	17	9	-11	-32	14	-13	0
Total M	-7	25	32	33	-10	-24	22	-26	5
F1, F2, F3	-1	2	-2	-2	-5	-2	3	1	5
F4	21	12	16	-14	-10	4	46	-21	14
F5	5	6	6	12	8	0	-6	-14	21
Total F	25	20	20	-4	-7	2	43	-34	40
Total M, F	18	45	52	29	-17	-22	65	-60	45
Total M4, M5 F4, F5	13	32	44	12	-12	-31	63	-53	32

TABLE LXIII

TOTAL ADVERBIALS
IQ SUBGROUP COMPARISONS USING THE WILCOXON
MATCHED-PAIRS SIGNED-RANKS TEST
AT GRADES 3 AND 6

Total Adverbials	Significance					
	A > B	B > A	A > C	C > A	B > C	C > B
Grade 3						
High	.1562		**.0183		*.0192	
Middle	.0918		**.0122		.2061	
Low		.1867	.1314		*.0166	
Grade 6						
High		.3821		.1539		.3783
Middle	.1020		*.0294		.1075	
Low	.0694		.4090			*.0548

* Significant at the .05 level

** Significant at the .01 level

Prepositional Phrases. Table LXIV presents the gains that appeared in the analysis of prepositional phrases. Each of the A subgroups at grade three exceeded their earlier performance, as did the 3B subgroups, whereas the 6B subgroups and the 3C and 6C subgroups experienced a mixture of gains and losses. The greatest gain was made by the high 6A subgroup and the greatest loss was shown by the middle 6C subgroup.

TABLE LXIV

PREPOSITIONAL PHRASES
FREQUENCY GAIN BETWEEN PRE- AND POST-PERFORMANCE
BY IQ SUBGROUPS OF GROUPS A, B, AND C
AT GRADES 3 AND 6

N = 10 For Each Subgroup

Prepositional Phrases	A			B			C		
	Hi	Mid	Lo	Hi	Mid	Lo	Hi	Mid	Lo
Grade 3	29	32	6	9	17	26	3	23	-9
Grade 6	55	26	31	-2	20	-15	39	-32	18

The Wilcoxon results in Table LXV show the differences at the third-grade level to be highly significant in only one case, in which the low IQ children of B surpassed their C counterparts. Two significant differences appear in the sixth-grade comparisons, both of which favor the experimental groups.

TABLE LXV

PREPOSITIONAL PHRASES
IQ SUBGROUP COMPARISONS USING THE WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST AT GRADES 3 AND 6

Prepositional Phrases	Significance					
	A > B	B > A	A > C	C > A	B > C	C > B
Grade 3						
High	.2578		.4286		.4286	
Middle	.1788		.3821			.4013
Low		.1423	.2061		**.0091	
Grade 6						
High	*.0162		.2776			.1539
Middle	.2776		.0838		*.0485	
Low	.0375		.3409			.1423

* Significant at the .05 level

** Significant at the .01 level

Sentence levels. The gains made in the use of level three-and-higher and level four-and-higher sentences are given in Tables LXVI and LXVII. At grade three, the low A subgroup made the highest gain in level three sentences, and the middle A subgroup made the highest gain in level four sentences.

At the sixth grade, the highest gains for level three were made by the high A and low C subgroups. For level four-and-higher sentences, the high and low subgroups of A ranked highest in gains.

Table LXVIII presents the Wilcoxon results for level four-and-higher sentences. A Wilcoxon test was not made for level three sentences because, of the two items, level four was considered to be more important. As explained previously, in the IQ subgroup comparisons only one item from each gain table was selected for Wilcoxon analysis.

In the level four comparisons, three instances of significant differences were found. At grade three, the low IQ subgroups A and B were found to differ at the .01 level of significance. At the sixth grade, both the high and low subgroups of A and B were significantly different (.01 level). The figures in Table LXVIII reveal that, in many cases, the subgroups were quite dissimilar even though the recognized significance levels were not met.

TABLE LXVI

SENTENCE LEVELS
FREQUENCY GAIN BETWEEN PRE- AND POST-PERFORMANCE BY IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADE 3

N = 10 For Each Subgroup

T-units	A			B			C		
	Hi	Mid	Lo	Hi	Mid	Lo	Hi	Mid	Lo
Level 3 and Higher	17	18	20	14	2	5	-10	6	-11
Level 4 and Higher	1	7	3	-2	0	-1	-5	6	-1

TABLE LXVII

SENTENCE LEVELS
FREQUENCY GAIN BETWEEN PRE- AND POST-PERFORMANCE BY IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADE 6

N = 10 For Each Subgroup

T-units	A			B			C		
	Hi	Mid	Lo	Hi	Mid	Lo	Hi	Mid	Lo
Level 3 and Higher	24	6	18	2	-5	-26	14	-40	25
Level 4 and Higher	23	-2	19	-8	-4	-8	10	-13	7

TABLE LXVIII

T-UNITS--LEVEL 4 AND HIGHER
IQ SUBGROUP COMPARISONS USING THE WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST AT GRADES 3 AND 6

T-units	Significance					
	A > B	B > A	A > C	C > A	B > C	C > B
Level 4 and Higher						
Grade 3						
High	.2061		.0869		.1814	
Middle	.1038		.4013			.1190
Low	*.0228		.1814			.4286
Grade 6						
High	**.0096		.1075			.1038
Middle	.4286		.1292		.2389	
Low	**.0089		.2578			.0606

* Significant at the .05 level

** Significant at the .01 level

Summary. Six elements were selected for the IQ subgroup comparisons of syntactic gains. In this analysis, significant differences between subgroups were found at all three IQ levels. The findings revealed significant differences in 23 of the comparisons: of the 23, 9 appeared at the low IQ level, 6 at the middle IQ level, and 8 at the high IQ level.

Thirteen of the 23 significant differences were in the third-grade comparisons and 10 in the sixth-grade comparisons. Of the 13 third-grade differences, 6 were in the high IQ range, 4 in the middle range, and 3 in the low range. Of the 10 sixth-grade differences, 2 were in the high, 2 in the middle, and 6 in the low range.

Seven of the 23 significant differences appeared in the A-B comparisons and in each case the A subgroups were the ones with the highest gains. In the A-C comparisons, the A subgroups again were superior--in each of the five cases of significant differences. In the B-C comparisons, B was superior in 7 instances and C in 4 instances.

The greatest number of significant differences was found in the comparisons relating to verbal phrase gains and adverbial gains, each of which accounted for 6 of the 23 significant differences in subgroup performances. Five of the 23 appeared in the analysis of subordinate clause gains, 3 were found in prepositional phrase gains, and 3 in sentence level gains.

Trends noted in the IQ subgroup analysis were that significant differences appeared: (1) at both grade levels, (2) at all IQ levels, and (3) in all three types of comparisons--A with B, A with C, and B with C. In those comparisons showing significant differences, the children in Program A were unsurpassed by those in Programs B or C; of the B-C significant differences, B was superior to C in approximately two-thirds of the comparisons and C was superior to B in one-third.

PART III. THE CORRELATION BETWEEN PRE-TREATMENT SYNTACTIC PERFORMANCE AND GAIN MADE DURING TREATMENT

Part III of this study was designed to answer the following question: Do those children who initially show evidence of advanced syntactic skills also surpass their peers in rate of progress?

The Spearman rank correlation coefficient was used to determine the correlation between pre-treatment scores and gain scores on selected syntactic variables. The correlations presented in this part of the study were based on an analysis of performances _within-groups_, whereas, in Part II, the analysis revealed _between-group_ relationships.

The correlations were determined with each child serving as his own match, i.e., his pre-treatment performance was compared to his gain performance. If he ranked high on the initial test (composition), would he also rank high in terms of rate of syntactic growth? If he ranked low on one, would he also rank low on the other? According to the findings of this study, the answer to both questions is "No." The preponderance of negative correlations in the following tables permits no other conclusion.

A point to be emphasized is that rank was determined on a _within-group_ (subgroup) basis--one group was not competing with another group. The point is being stressed because, in the following discussion, _between-group_ comparisons are also made (comparisons of the various IQ subgroups of groups A, B, and C), even though the correlations were based solely on within-group performances.

Subordinate clauses. Table LXIX presents the findings of the subordinate clause analysis. More positive correlations appear in Table LXIX than in any other table; however, only four of the eighteen subordinate clause correlations are positive, and none of the positive correlations were found to be significant.

The correlation for the low IQ subgroup of group A at grade six (.370) was the highest positive correlation found in the entire analysis, yet it fell below the significance level. Two of the negative correlations were significant at the .01 level and three at the .05 level. For three of the subgroups—6A high IQ, 6B middle IQ and 3C middle IQ—the negative correlations were very high, indicating that the ranks of almost all children were completely reversed—the ones who ranked highest on the pre-test were the ones who ranked lowest in amount of gain shown, and vice versa.

TABLE LXIX

TOTAL SUBORDINATE CLAUSES CORRELATION OF INITIAL PERFORMANCE AND GAIN FOR IQ SUBGROUPS AT GRADES 3 AND 6

N = 10 For Each Subgroup

IQ Subgroup	Group A	Group B	Group C
	Grade 3 Correlations		
High	-.187	.134	-.285
Middle	-.012	.113	-.708*
Low	-.290	-.035	-.591*
	Grade 6 Correlations		
High	-.742**	-.563*	-.460
Middle	-.366	-.796**	-.357
Low	.370	.100	-.484

*Significant at the .05 level

**Significant at the .01 level

Verbal phrases. Table LXX emphasizes to an even greater degree the definite existence of a high negative relationship between initial performance and gain. Only one positive correlation was found in the verbal phrase analysis, 3B middle IQ, but it was not significant. Eight of the negative correlations were of .05 significance and four reached the .01 significance requirement.

TABLE LXX

TOTAL VERBAL PHRASES
CORRELATION OF INITIAL PERFORMANCE AND GAIN FOR IQ SUBGROUPS AT GRADES 3 AND 6

N = 10 For Each Subgroup

IQ Subgroup	Group A	Group B	Group C
		Grade 3 Correlations	
High	-.142	-.583*	-.862**
Middle	-.565*	.268	-.771**
Low	-.575*	-.601*	-.650*
		Grade 6 Correlations	
High	-.551	-.551	-.336
Middle	-.639*	-.669*	-.612*
Low	-.490	-.775**	-.845**

*Significant at the .05 level

**Significant at the .01 level

M5's. As shown in Table LXXI, the middle IQ 3A subgroup was found to have a correlation of exactly zero in the M5 analysis, indicating that half of the children ranked slightly higher on the gain-test than on the pre-test, and half ranked slightly lower. In a sense, the comparison resulted in a tie, an absence of either a positive or a negative relationship. The negative correlations were once again too numerous to be discounted as chance happenings.

TABLE LXXI

M5'S
CORRELATION OF INITIAL PERFORMANCE AND GAIN FOR IQ SUBGROUPS AT GRADES 3 AND 6

N = 10 For Each Subgroup

IQ Subgroup	Group A	Group B	Group C
		Grade 3 Correlations	
High	-.016	-.608*	-.830**
Middle	0	-.679*	-.172
Low	-.547	-.250	-.803**
		Grade 6 Correlations	
High	-.666*	-.339	-.229
Middle	-.172	-.239	-.624*
Low	-.340	-.806**	-.478

*Significant at the .05 level

**Significant at the .01 level

Total M's. The total M correlations, shown in Table LXXII, present even more evidence concerning the negative relationship of initial performance to rate of growth. The pattern is obvious at all IQ levels at both grades. Only the high IQ subgroup of A deviated from the well-established trend, with a non-significant positive correlation of .310.

TABLE LXXII

TOTAL M'S
CORRELATION OF INITIAL PERFORMANCE AND GAIN
FOR IQ SUBGROUPS AT GRADES 3 AND 6

N = 10 For Each Subgroup

IQ Subgroup	Group A	Group B	Group C
		Grade 3 Correlations	
High	.310	-.430	-.700*
Middle	-.121	-.203	-.611
Low	-.312	-.006	-.757**
		Grade 6 Correlations	
High	-.263	-.566*	-.378
Middle	-.678*	-.375	-.451
Low	-.233	-.187	-.200

*Significant at the .05 level

**Significant at the .01 level

F4's. In Table LXXIII, the F4 correlations, negative figures are shown for all eighteen comparisons. The correlation shown for the 3C high IQ children (-.940) indicates almost a perfect negative correlation with every child but one experiencing a reversal in rank on the second test, the growth test. Six of the correlations were significant at the .01 level—strong evidence that the negative correlations are not happenstance occurrences.

TABLE LXXIII

F4'S
CORRELATION OF INITIAL PERFORMANCE AND GAIN FOR IQ SUBGROUPS AT GRADES 3 AND 6

N = 10 For Each Subgroup

IQ Subgroup	Group A	Group B	Group C
		Grade 3 Correlations	
High	-.174	-.209	-.940**
Middle	-.351	-.760**	-.830**
Low	-.714*	-.106	-.812**
		Grade 6 Correlations	
High	-.172	-.796**	-.140
Middle	-.430	-.702**	-.715*
Low	-.433	-.213	-.533

*Significant at the .05 level

**Significant at the .01 level

Total F's. Again in Table LXXIV, Total F's, the pattern is indisputable. A few of the correlations approach zero, but none show a positive relationship. The negative correlations for group C children are higher than those for groups A and B, reaching the .01 level in three cases. A perfect negative correlation is approached by the 6C middle IQ children with a -.869 correlation between pre- and gain performances.

TABLE LXXIV

TOTAL F'S
CORRELATION OF INITIAL PERFORMANCE AND GAIN
FOR IQ SUBGROUPS AT GRADES 3 AND 6

N = 10 For Each Subgroup

IQ Subgroup	Group A	Group B	Group C
		Grade 3 Correlations	
High	-.072	-.266	-.072
Middle	-.175	-.595*	-.796**
Low	-.457	-.193	-.687*
		Grade 6 Correlations	
High	-.221	-.666*	-.640*
Middle	-.384	-.618*	-.869**
Low	-.251	-.125	-.775**

*Significant at the .05 level

**Significant at the .01 level

Sentence levels. Earlier it was pointed out that, in the present study, the analysis of sentence levels seemed to reveal evidence of syntactic maturity more clearly than any other single measure. Table LXXV, T-units of level three-and-higher complexity, shows a predominance of negative figures which are higher, overall, than those in any previous table. One positive score is found at

TABLE LXXV

T-UNITS LEVEL 3 AND HIGHER
CORRELATION OF INITIAL PERFORMANCE AND GAINS
FOR IQ SUBGROUPS AT GRADES 3 AND 6

N = 10 For Each Subgroup

IQ Subgroup	Group A	Group B	Group C
	Grade 3 Correlations		
High	-.544	-.942**	-.342
Middle	-.487	-.515	-.512
Low	-.778**	.290	-.837**
	Grade 6 Correlations		
High	-.463	-.533	-.375
Middle	-.300	-.430	-.539
Low	-.284	-.463	-.178

**Significant at the .01 level

the 3B low IQ level, but it is nonsignificant. Once again, the students who wrote the most level-three sentences in the pre-treatment compositions were not the ones who experienced the highest gains. The highest gains were made by the children who ranked lowest in the pre-treatment test. Table LXXVI, the final one in Part III, seems to pile up still more evidence that, overall, a negative correlation predominates in the relationship of syntactic growth to initial ability.

TABLE LXXVI

T-UNITS LEVEL 4 AND HIGHER
CORRELATION OF INITIAL PERFORMANCE AND GAIN
FOR IQ SUBGROUPS AT GRADES 3 AND 6

N = 10 For Each Subgroup

IQ Subgroup	Group A	Group B	Group C
		Grade 3 Correlations	
High	-.075	-.723*	-.758**
Middle	-.488	-.383	-.607*
Low	-.385	-.071	-.276
		Grade 6 Correlations	
High	-.330	-.536	-.940**
Middle	-.500	-.445	-.757**
Low	-.120	-.662*	-.672*

*Significant at the .05 level

**Significant at the .01 level

Summary. In the analysis described in the preceding pages, a total of 54 significant negative correlations were found and many more correlations approached significance levels. The correlations were based on a comparison of gain scores with the scores of the pre-treatment compositions. The 8 syntactic elements selected for the analysis were considered to be the most important of the 36 variables that were isolated for analysis in the present study.

Of the 54 significant correlations, 29 appeared in third-grade comparisons and 25 in sixth-grade comparisons. The performances of two subgroups evidenced more stability (i.e., fewer extreme rank-order-changes between the pre-treatment-test rank and the gain-test rank) than was found in the other subgroups; the experimental Program A children at the high IQ level at grade three and the low IQ level at grade six did not contribute any of the 54 significant negative correlations. At the same time, they were unable to show any significant positive correlations. Two experimental subgroups displayed only one significant negative correlation each, the middle IQ children in Program A and the low IQ children in Program B, both at third grade.

The Program A children contributed only 8 of the 54 significant negative correlations, 4 at each grade level, and considerably fewer than their normal share of the 54 which would be 18. They contributed one-seventh to the total, rather than the one-third which might be expected.

The children in Program B were found to contribute to the total in the proportion that would normally occur, i.e., one-third of the cases, with 19 significant negative correlations. Half of the significant correlations were contributed by the control groups, children in Program C. The evidence is not strong, but it does give a slight indication of more stability of Program A children in maintaining rank order in peer-group in both the initial-ability and progress contests. Apparently, for Program A children, those who scored high in the initial-performance test were not always the ones to appear at the very bottom of the scale on the gain test. Conversely, those who scored low at the start did not always achieve the high gain scores.

Of the 27 significant negative correlations found in the performance comparisons of Program C children, 17 were at the third-grade level and 10 at the sixth-grade level. Of the 17 at the third grade, 5 each appeared in the high and middle IQ range and 7 in the low IQ range. Of the 10 at the sixth grade, 2 were found at the high IQ level, 5 at the middle level, and 3 at the low level.

The analysis of level four-and-higher sentences (shown earlier to be a most important criterion of syntactic maturity) revealed high negative correlations for all but one of the Program C subgroups, in 5 of the 6 comparisons; for Program B children, 2 negative correlations of significance were noted; and for Program A children, no significant differences were found--the rank order of the pupils on the level-four gain test did not differ significantly from the rank order on the pre-test of level-four sentences.

When A, B, and C findings were pooled, children in high and low IQ ranges each contributed 17 to the total of 54 significant negative correlations, and the remaining 20 were contributed by children of the middle IQ range.

An overall view of the findings seems to provide rather conclusive evidence that a high negative correlation exists between syntactic performance and rate of syntactic growth. Only in a few cases was this predominate pattern altered, and it was the children in Programs A and B who deviated, albeit only slightly, from the regular pattern. A word of caution is appropriate here: the fact that the experimental children tended to deviate from the regular negative-correlation pattern does not mean that they were more proficient, syntactically, than their matched mates. The findings of the Part III analyses do not in any way reveal which of the three groups--A, B, or C--can be considered superior in terms of actual syntactic performance. In fact, as mentioned previously, the children of Program C were shown in Part I to equal or surpass the children in Programs A and B in certain comparisons.

The question asked in the Part III analysis did not concern between-group comparisons. Actually, in this analysis each child was competing with himself, so to speak, to see whether he could maintain or advance the rank he had previously established in terms of his "syntactic standing" among his peers. The findings show that he could not maintain or advance his rank--that, generally, if he ranked high initially, he fell in rank when growth only was considered.

The findings in Part III of this study were thought to be highly significant. Apparently, in the development of syntactic skills, a "ceiling" of some sort must exist as the child progresses through various developmental stages. Once a certain level of proficiency is attained, growth continues at a considerably reduced rate. According to the results of the present study, the most significant gains are made by those children who rank lowest, in terms of level of syntactic ability, among their peers. Apparently, those who rank lowest at the start are almost automatically assured of outranking their peers in syntactic-growth contests. Evidently, those who rank highest initially are unable to make "growth leaps"; gain appears to be restricted because those children are already closer to the ceiling of the maturation level that is attainable at their own particular age--they are near the "saturation" point with syntactic growth seemingly restricted until they first advance to a higher level in terms of chronological age.

Before the analysis was conducted, it was thought that both positive and negative correlations would have an equal chance to appear and that low correlations might predominate. Such results were expected because so many aspects of language have been found to be "unpredictable." Obviously, the phenomenon described in this part of the study cannot be lightly dismissed on the grounds "it just happened that way." The interpretation of the findings may be challenged, but the actual correlations must be accepted as something other than chance occurrences. The only explanation that can be offered by the researcher is the following one: Growth in the development of certain syntactic skills is not unlimited--it is restricted by age or by some unknown factor or factors.

Can the language-growth-ceilings be lifted? Is chronological age the only opposing force? Do the language experiences we provide at the various grade levels serve as additional restricting forces? Is a faster growth-rate possible, and if so, is it desirable? These questions must at this point remain unanswered. They appear to be extremely significant questions and they offer several challenges to future researchers. The answers could lead to dramatic changes in the teaching of language arts at the elementary level, or the answers could lead to a confirmation of present practices as being entirely satisfactory approaches to the teaching of language.

PART IV. A COMPARISON OF THE SYNTAX OF GIRLS AND BOYS

Does the syntax of the writing of girls differ from that of boys? Part IV of this study was conducted to provide an answer to the above question. The findings presented in this final section of Chapter V are based on an analysis of the syntax of post-treatment compositions written by matched girl-boy pairs. In order to obtain a sufficient number of closely matched girl-boy pairs, the children in Groups A, B, and C were pooled. In this analysis, twenty-seven matched pairs, nine at each IQ level, were selected from each grade, making an overall total of 108 girls and boys in the sample. The analysis involved a comparison between two groups, similar to the analysis in Part II, therefore, the Wilcoxon matched-pairs signed-ranks test was again used as the appropriate statistical test.

Total Group Comparison

Table LXXVII presents the results of the comparison of total groups, i.e., 27 girls vs 27 boys at each grade level. At both grades, the girls used a wider variety of sentence patterns than the boys. The differences were significant at the .05 level and the sixth-grade difference approached the .01 significance level.

In the use of subordinate clauses, the girls surpassed the boys at both grades. At the sixth grade, the difference was significant beyond the .001 level. The third-grade difference was less pronounced, but also clearly indicated superior performances by the girls.

In the comparison of verbal phrases, the girls were favored at grade three, but at grade six, the boys outperformed the girls; however, the margin of the difference was very slight.

TABLE LXXVII

COMPARISON OF THE SYNTAX OF GIRLS AND BOYS
THE WILCOXSON MATCHED-PAIRS SIGNED-RANKS TEST
AT GRADES 3 AND 6

Element	Significance			
	Grade 3		Grade 6	
	Girls>Boys	Boys>Girls	Girls>Boys	Boys>Girls
Variations of Sentence Patterns	*.0455		*.0183	
Subordinate Clauses	.0721		***.0005	
Verbal Phrases	.0708			.4562
Adverbials	.0968		*.0015	
Prepositional Phrases	.2451		.1271	
T-units Level 4 and Higher	.3372		.1539	

*Significant at the .05 level

**Significant at the .01 level

***Significant at the .001 level

The sixth-grade girls significantly outranked the boys in the use of adverbial elements; the third-grade results, while not meeting significance requirements, show that the third-grade girls also surpassed their matched pairs of the opposite sex.

The differences in use of prepositional phrases were not significant at either grade level, but, just as before, the girls were found to outrank the boys.

Similar findings are revealed in the comparison of T-units of level four and higher complexity—at both grades the girls were superior to the boys although neither of the differences reached significance levels. The third-grade difference in level four sentences was less pronounced than the sixth-grade difference.

IQ Subgroup Comparisons

The analysis by IQ subgroup, shown in Table LXXVIII, revealed the same overall pattern—the supremacy of the girls; however, the findings show that in 10 of the 36 comparisons by IQ level the boys surpassed the girls, even though not to a significant degree in any one of the 10 instances. The girls outranked the boys in 26 comparisons, 10 of which were significant beyond the .05 level and 3 beyond the .01 level.

The analysis by IQ level failed to explain the differences between the syntactic performances of girls and boys in terms of intelligence, i.e., the overall differences could not be attributed to differences appearing at any one specific IQ level. In general, the gap between the performances of girls and boys was somewhat wider at the sixth-grade level than at the third grade.

The sixth-grade girls at all three IQ levels differed significantly from the boys in their use of a wider variety of sentence patterns.

Three significant differences appeared in the subordinate clause analysis and in every comparison the girls ranked higher than the boys. The low IQ sixth-grade

TABLE LXXVIII

COMPARISON OF THE SYNTAX OF GIRLS AND BOYS BY IQ SUBGROUP USING THE WILCOXSON MATCHED-PAIRS SIGNED-RANKS TEST AT GRADES 3 AND 6

Element	Significance			
	Grade 3		Grade 6	
	Girls>Boys	Boys>Girls	Girls>Boys	Boys>Girls
Variations of Sentence Patterns				
High	.4052		*.0427	
Middle	.0808		**.0087	
Low	.1635		*.0344	
Subordinate Clauses				
High	*.0427		.1056	
Middle	.2611		*.0212	
Low	.1190		**.0064	
Verbal Phrases				
High		.1814		.2776
Middle	*.0344		.1562	
Low	*.0526			.4286
Adverbials				
High	.1423		.1562	
Middle	.2206			.4761
Low		.4443	**.0038	
Prepositional Phrases				
High		.3821	.4522	
Middle	.0869			.2578
Low		.3897	.0465	
T-units Level 4 and Higher				
High	.2912		.1190	
Middle		.4286		.3632
Low	.1562		.1635	

*Significant at the .05 level

**Significant at the .01 level

***Significant at the .001 level

girls far surpassed the boys, beyond the .01 level and approaching the .001 level.

Verbal phrase differences were more extreme at the third grade with two significant comparisons, both favoring the girls. The high IQ third-grade boys surpassed the girls, but the difference was not significant.

Only one significant difference appeared in the adverbial analysis--at the low IQ level at grade six; the girls outranked the boys with a difference significant beyond the .01 level. Otherwise, the adverbial comparisons did not reveal an extreme disparity in performance levels.

In prepositional phrase scores also, only one instance of significant differences was found. In most cases, the divergence was not extreme and the boys could claim a slight superiority in one-half of the comparisons.

The level four-and-higher analysis favored the girls in four of the six comparisons, and in addition, the margin of superiority was greater than in the two comparisons dominated by the boys. None of the differences, however, reached the established significance levels.

Summary

In Part IV of this study, the syntax of girls and boys was compared. Compositions that were written during a forty-minute writing-situation provided the corpus of sentences on which the analysis was based. The girls wrote more sentences than the boys; however, the difference in production cannot be cited as the reason for the one-sided results. (The sentence ratio at the third grade was 6 to 5, and at the sixth grade, 7 to 5. The correlations show that syntactic-variable-differences were much greater than the sentence-ratio differences. It is also important to note that the analysis was based on the comparison of individual, not group, performances--the syntax of each child was compared to the syntax of a matched mate of the opposite sex.)

Overall, in terms of significant differences in syntactic performance, the girls outranked the boys: at both grades; at all IQ levels; and in each of the 14 instances of extremely wide divergence of performance levels. The differences could not be accounted for by intelligence or grade level, nor could the differences be attributed to instructional programs because the children of Groups A, B, and C were combined for this analysis.

The null hypothesis was rejected at the .05 level of significance in the total-group comparison (27 girls, 27 boys) at both grades of the variations of patterns used, and at the sixth grade, in the comparisons of subordinate clauses and adverbials; in the case of subordinate clause differences at the sixth grade, the null hypothesis was rejected at the .001 level.

In the analysis by IQ subgroup (9 girls, 9 boys) the null hypothesis was rejected at the .05 level in the third-grade comparison of subordinate clauses at the high IQ level, and in the comparison of verbal phrases at both the middle and low IQ levels.

At the sixth grade, the null hypothesis was rejected at the .05 level in the comparisons of: variations of sentence patterns, high and low IQ subgroups; subordinate clauses, low IQ subgroup; and adverbials, low IQ subgroup.

Five of the significant differences were found in the low IQ comparisons, three in the middle IQ comparisons, and two in the high IQ subgroup comparisons.

The findings dictate that the question asked in the Part IV analysis be answered as follows: The syntax of girls and boys was found to differ significantly in the analysis of six important syntactic variables; in every comparison in which a significant difference was found, the girls consistently outranked the boys.

CHAPTER VI

SUMMARY AND CONCLUSIONS

SUMMARY

The written language of children enrolled in three different language arts programs was analyzed in this segment of the Nebraska study of the Syntax of Children's Writing. The syntax of 6,392 sentences written by 180 elementary school children was described and comparisons were made. In grade three and in grade six, thirty sets of matched "triplets," ninety subjects, participated in the project. For one semester, each member of one of the sets of triplets participated in one of the three programs, Program A, B, or C. Compositions were collected from each of the matched groups of thirty children--Groups A, B, and C--at the beginning of the experiment and at the end. Thirty-six syntactic variables were identified for the analysis of the children's sentences and also for the analysis of sentences written by professional writers. The sentences written by professional writers were used as a basis for comparing the syntax of children's writing with the syntax of well-written adult prose. The corpus of professional writing served as a "touchstone" and provided a means of measuring children's syntactic growth. Comparisons were made of the written syntax of: (1) children and professional writers; (2) children in the three different programs; (3) children of three IQ levels; and (4) girls and boys.

The four parts of the study were designed to answer these questions:

1. How does the written syntax of children in grades three and six compare with the written syntax of adults, i.e., adult professional writers?
2. Does the rate of growth in terms of certain syntactic skills vary

significantly among groups of children who are enrolled in different language arts programs?

3. Do those children who initially show evidence of advanced syntactic skills also surpass their peers in rate of progress?
4. Does the syntax of the writing of girls differ from that of boys?

The first question refers to Part I of the study, and the answer was needed in order to establish criteria for determining syntactic growth, which was the emphasis in Part II, the major part of the study. Part III and Part IV relate to questions 3 and 4 and are based on an analysis of performances within treatment-groups.

Program A was considered the intensive-treatment program. Selected units of A Curriculum for English provided the basis of instruction and additional materials were prepared by Nell Thompson, one of the investigators. Both of the Program A teachers have, as part of their educational backgrounds, training in literature, linguistics, and rhetoric. Working as a team, the investigators taught the language class only—for the remainder of the school day the children in Program A were taught by their regular teachers.

In Program B, referred to as the moderate-treatment program, the curriculum also included the teaching of units from A Curriculum for English. This program was taught by regular classroom teachers who were encouraged to use as many or as few of the suggested procedures and materials in the units as they wished. The teachers were also free to use supplementary materials if they so desired. The additional materials prepared specifically for Program A were not used in this program.

In Program C, referred to as the control program, the curriculum represented a traditional approach, one that centered around the procedures and exercises set forth in textbooks based on traditional grammar. A Curriculum for English was not used in this program, nor were the materials prepared by the investigator. Program C was taught by the regular classroom teachers.

CONCLUSIONS

The most important findings and conclusions are as follows:

PART I

1. All of the children's groups used the 1 2 4 pattern (subject-verb-object) more frequently than the professional writers. Apparently, as writers mature, they tend to use more 1 2 pattern (subject-verb) sentences and fewer 1 2 4 pattern sentences. The high IQ children of Program C gave evidence of extreme dependence on one syntactic option--they used the 1 2 4 pattern in one-half of their sentences, a proportion considerably above that of any of the other groups.
2. All of the children's groups and the professional writers used the 1 2B 5 pattern (subject-copulative verb-noun complement) to the same extent--in approximately 10 per cent of their sentences.
3. The expletive pattern (T1) was used most often by low IQ children and least by high IQ children, and also, more often by third-grade groups than by sixth-grade groups.
4. Questions appeared two to three times as often in children's writing as in professional writing.
5. The ratio of compound predicates used by sixth-grade children approached the professional ratio and was considerably higher than that of third-grade children.
6. Subordinate clauses appeared in one-half of the professional writers' sentences and in one-fifth to one-third of the children's sentences.

This supports the findings of other researchers—that increase in subordinate-clause use parallels increase in chronological age. High IQ third-grade children used the most adverbial clauses, more than any of the sixth-grade groups.

7. Verbal phrases appeared in 41 per cent of the adult writers' sentences, in 16 or 17 per cent of sixth-grade sentences, and in only 5 to 10 per cent of the third-grade sentences. The professionals used approximately twice as many as sixth grade writers who, in turn, used twice as many as third-grade writers. Of the different types of verbal phrases, children used the infinitive with greatest facility. Present and past participles were found in professional writing 4 to 6 times as often as in sixth-grade writing, and 8 to 12 times as often as in third-grade sentences. The gaps found between age levels seems to indicate that increase in use of verbal phrases is an important indication of syntactic growth.
8. All children used the M1 (a movable which precedes everything else in the sentence) more often than professional writers, but they used adverbials in the final position only one-third to one-half as often as did the professionals. In total movable adverbials, a definite progression was traced from the low IQ third-grade children on up through the third- and sixth-grade groups to the professional level, the latter displaying one movable per sentence. Adverbials in positions before and after the verb appeared in the writing of high IQ sixth grade pupils in about the same proportion as that found for the professional writers. In total adverbials, both movable and fixed, the high IQ groups surpassed the middle and low IQ groups at both grade

levels. The professionals averaged about two adverbials per sentence and the children averaged about one per sentence.

9. In the use of prepositional phrases, a progression was apparent in terms of IQ level and grade level. The phrase-per-sentence ratio was found to be 1 to 2 at the third grade, 3 to 4 at the sixth grade, and about 7 to 4 at the professional level. An interesting observation was made: prepositional phrases were found to appear with unbelievable regularity at the ratio of 2 for each subordinate clause for the children's groups at all IQ and grade levels. The ratio for professional writers was 4 prepositional phrases per subordinate clause.
10. A steady progression was observed in the frequency ratios of level-three and level-four sentences. Level three-and-higher sentences appeared in 1 out of 4 at the third-grade low IQ level, 1 out of 3 at the third-grade high IQ level, 1 out of 2 at the sixth grade, and in 7 out of 10 sentences at the professional level. Four-level sentences were used twice as often by professional writers as by sixth-grade writers who, in turn, used twice as many as third-grade writers. Use of level-three-and-four sentences clearly separates the mature from the immature, in terms of syntactic ability. At the third grade, level-four sentences appeared at the ratio of 5 or 6 per hundred sentences; at the sixth grade, about 15 per hundred; and at the professional level, 40 per hundred.

Overall, a definite progression was evident as syntactic performance was traced from third-grade level to the sixth and on up to the professional level. This progression was particularly evident in subordinate clauses, verbal phrases, adverbials, prepositional phrases, and sentence levels.

PART II

1. The major hypothesis of this study was: There are no significant differences in the rate of syntactic growth of children in Programs A, B, and C. The hypothesis was rejected in both tests, the Wilcoxon matched-pairs test and the analysis of covariance, at the .05 level of significance. (In many cases, at the .01 level.)
2. Trends noted in the IQ subgroup analysis were that significant differences appeared: (1) at both grade levels; (2) at all IQ levels; and (3) in all of the treatment-group comparisons--A with B, A with C, and B with C.
3. In those comparisons showing significant differences, the children in Program A were unsurpassed by children in the other two programs. In the comparisons of children in Programs B and C, the B groups were superior in two-thirds, and the C groups in one-third of the comparisons.
4. The greatest number of significant differences was found in the analyses of verbal phrases and adverbials (a tie), with subordinate clauses next, and third, sentence levels and prepositional phrases (another tie).
5. In the comparisons of the gains made in the number of different patterns used, the middle and low IQ children of Group A at grade three ranked highest.
6. The highest gains in subordinate clauses were made by children in the third-grade experimental programs.
7. In the use of total verbal phrases and adverbials, Program A children experienced the highest gains.
8. The experimental groups were favored in the comparisons of prepositional phrases at both grade levels.

9. The highest gains in level-three and level-four sentences were made by the Program A children.

The intensive-treatment program, Program A, appeared to pay sizable dividends at both grades. Unexplained forces may have been at work, but the evidence points to the definite superiority of the Program A groups in the syntactic gains made during the semester. In Program A, a below-average third-grade class was found to grow syntactically at a highly desirable and unexpected rate. The superior gains made by both experimental groups A and B, at grade three cannot be ignored; the evidence seems to warrant more than a modest endorsement of Programs A and B, the programs using A Curriculum for English. Both the Wilcoxon and the analysis of covariance tests indicated that the gains didn't just happen by chance. In the sixth grade also, Group A children made considerably greater gains than those in Groups B and C. The difference between Groups B and C, however, was less pronounced at the sixth grade than at the third grade. The statistical tests found the B and C groups to be comparable at the sixth-grade level.

PART III

1. Negative correlations were found to predominate in within-group comparisons of syntactic performance and rate of syntactic growth. This was true at both grade levels and at all IQ levels.
2. The children who ranked highest in ability ranked lowest in rate of growth; conversely, children who ranked lowest in ability ranked highest in rate of growth.
3. Once a certain level of proficiency was attained, growth seemed to continue at a considerably reduced rate.
4. The highest negative correlations were found in the comparisons of initial performance and growth in the following: use of verbal phrases,

use of fixed and movable adverbial elements, and use of sentences beyond levels three and four.

5. The children in Program A gave evidence of more stability in maintaining rank in both tests, ability and growth, than did children in Programs B and C. Children in Program B were better able to maintain rank than those in Program C.

PART IV

1. In all comparisons revealing significant differences in the syntactic performance of girls and boys, the girls were found to outrank the boys.
2. The gap between girls and boys was somewhat wider at the sixth-grade level than at the third-grade level.
3. The overall differences in the performances of girls and boys could not be attributed to differences appearing at any one specific IQ level.
4. The null hypothesis was rejected as the girls surpassed the boys in the number of different patterns used, and in the use of subordinate clauses and adverbials.
5. The girls were also the favored group in comparisons of prepositional phrases and in comparisons of level four-and-higher sentences.

The findings of this study do not answer the question: Which children wrote the best compositions--those in Programs A, B, or C? The study was not designed to answer that question, but rather: Which children gave evidence of the greatest syntactic growth during the half-year experiment? The questions are not the same and findings should not be misinterpreted. The results of the study do show that the greatest syntactic growth was displayed by the children in Program A, with Program B children ranking second, and Program C children ranking third.

RECOMMENDATIONS

The results of this research reveal superior gains by those children who were taught by language arts specialists. Therefore, this study may provide information of value to elementary educators as they wrestle with the problem of deciding which is superior, the self-contained-classroom approach or the subject-specialist approach.

A word of caution needs to be injected at this point: The children in Program A may have shown superior gains, not because they were taught by language arts specialists, but instead, because they were taught by the specialists and by their regular teachers. The children in Programs B and C were not given this "double exposure." Because language permeates the entire curriculum, language "class" actually takes place throughout the entire school day, not just in the time reserved on the schedule. In Program A, the language specialists were used in addition to, not instead of the regular teachers. The same amount of growth might not have taken place had the specialists replaced the regular teacher for the entire day.

More experimentation is needed before the self-contained vs specialist question can be answered. Both the investigator and assistant felt that the children might have been losers, not gainers, if their school day had been segmented into specialist-taught classes in every subject. It was thought that the regular teacher provided a most important stabilizing influence, one that would be missing if the elementary child were taught by a different teacher every hour.

In spite of the favorable results, both of the Program A teachers had some misgivings about the quality of their teaching; they did not feel they got to know each child well enough; they felt that in one period a day they could not provide adequately for individual differences—and, unfortunately, the subject they taught was one in which individual differences are so very pronounced.

Therefore the recommendation is made that the language arts teacher spend a minimum of two to three hours per day with the same group of children. This would mean that the language arts specialist needs to be a specialist in another subject too, preferably social studies.

The following additional recommendations and observations are an outgrowth of the study:

1. Children's literature should occupy a central place in the elementary language arts program. In this research the greatest syntactic gains were made by those children who participated in literature-based language arts classes.
2. Passages from literature can be used effectively as models in the writing of compositions. Without indulging in the practice of over-analysis, teachers can lead children to discover how an author achieved a certain effect—how he used language in a certain way in order to achieve that particular effect.
3. This research suggests that language can be perfected without being dissected. The elementary school should provide many pleasurable and challenging experiences with language. Children are interested in language—the curriculum should build upon the child's natural curiosity about his language and how it works; the curriculum does not foster this inherent interest in language when the child is forced to deal in abstractions before he is ready, asked to make detailed analyses of language, or given meaningless and boring assignments.
4. The teaching of sentence patterns should be recognized as a means to a goal, and not as a goal. The teaching of sentence patterns is of value only as a means of clarifying the relationship of other syntactic

elements to the basic pattern. Even the low IQ third-grade children have a command of all the basic patterns. In fact, their performance in the use of sentence patterns is closer to the performance of the professional writer than that of middle or high IQ children. The focus, therefore, should be on sentence patterns as means, not ends. What happens within the framework of the basic pattern is the important concept to be developed.

It is also recommended that the practices listed below be given serious consideration and be tested by further research. In the present study, the children who experienced the greatest syntactic growth were in a language program in which:

1. Approximately one-third of the class time was devoted to the oral reading of children's literature by the teacher, one-third was reserved for pupil participation in oral activities, and one-third of the time was devoted to written composition and language explorations.
2. No grades were ever placed on the children's papers. The emphasis was on sharing language experiences with classmates.
3. Improvement was encouraged by means of positive comments; negative criticism was withheld.
4. A wide variety of activities were incorporated: emphasis was given to several types of literature and poetry, choral speaking, dramatization, group discussions and projects; and films, records, and transparencies were used.

A CONCLUDING STATEMENT

Less grammar, more literature; less emphasis on rules, more opportunities to actually use language; less negative criticism, more positive comments; fewer long compositions, more of sentence- or paragraph-length — the results of this study indicate that syntactic growth takes place in such an environment. The findings also indicate that girls are syntactically more mature than boys. Another highlight of the study is that, apparently, those children who are lowest in ability are almost automatically assured of outranking their peers in syntactic-growth contests. Those who rank highest appear to be unable to make "growth-leaps"—a "ceiling" of some sort prevents their doing so.

Is a wide exposure to literature the key to syntactic growth? How much language training do elementary teachers need? Can the language-growth "ceilings" be lifted? Is an even faster growth rate possible, and if so, is it desirable? Even though knowledge of language behavior is steadily increasing, much more remains to be learned. At the present time, the possibilities for further research appear to be unlimited. Exploration in language is similar to space exploration—vast realms, yet to be investigated, present countless challenges to the brave explorer.

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SCHOOLS PARTICIPATING IN THE STUDY

October 1966-February 1967

Experimental I (referred to as Group A)

Prescott School, 2024 South 20th Street, Lincoln, Nebraska
Verda M. Gerlach, Principal
Allice E. Munnis, Assistant Principal

Number of subjects in Sample

Grade 3	16 girls	14 Boys
Grade 6	13 Girls	17 Boys

Experimental II (referred to as Group B)

Meadow Lane School, 7200 Vine Street, Lincoln, Nebraska
Lyle K. Bargman, Principal
Alice W. VandenBosch, Assistant Principal

Number of Subjects in Sample

Grade 3	16 Girls	14 Boys
Grade 6	13 Girls	17 Boys

Control (referred to as Group C)

Beals School, 1720 South 48th Street, Omaha, Nebraska
Harriette Egan, Principal

Number of Subjects in Sample

Grade 3	5 Girls	5 Boys
Grade 6	6 Girls	7 Boys

Belle Ryan School, 1807 South 60th Street, Omaha, Nebraska
Elsie W. Della, Principal

Number of Subjects in Sample

Grade 3	11 Girls	9 Boys
Grade 6	7 Girls	10 Boys

IQ SCORES OF SUBJECTS

TABLE LXXIX
IQ SCORES OF GROUPS A, B, AND C OF THE THIRD-GRADE SAMPLE

(Girls are Designated by #)

IQ Subgroup	Matched "triplets"	Total Intelligence		
		Group		
		A	B	C
High				
	1	129	129	129
	# 2	128	129	128
	3	122	122	121
	# 4	120	120	120
	# 5	120	120	119
	# 6	120	120	119
	# 7	119	120	118
	# 8	115	112	117
	9	112	112	112
	#10	112	111	113
Middle				
	11	111	111	111
	#12	111	109	111
	#13	109	109	109
	14	108	111	108
	15	107	108	107
	16	103	107	103
	17	103	103	102
	#18	103	100	106
	19	101	101	101
	20	101	98	101
Low				
	#21	99	98	103
	#22	98	97	103
	23	97	97	96
	#24	97	97	100
	25	96	96	95
	#26	95	95	96
	#27	92	92	89
	28	91	91	92
	29	85	85	85
	#30	82	84	77

IQ SCORES OF SUBJECTS

TABLE LXXX

IQ SCORES OF GROUPS A, B, AND C OF THE SIXTH-GRADE SAMPLE

(Girls are Designated by #)

IQ Subgroup	Matched "triplets"	Total Intelligence		
		Group		
		A	B	C
High				
	# 1	136	135	135
	# 2	133	133	133
	# 3	128	129	128
	4	128	128	128
	# 5	126	127	126
	6	126	126	126
	# 7	125	125	125
	# 8	124	124	124
	9	124	123	123
	10	122	122	122
Middle				
	#11	121	121	121
	12	121	120	121
	#13	119	119	119
	14	117	118	116
	15	115	114	114
	16	114	114	114
	#17	114	114	114
	#18	114	114	115
	19	114	114	114
	20	114	114	113
Low				
	21	112	112	112
	22	110	110	110
	23	108	109	108
	#24	108	111	108
	25	108	107	108
	26	108	106	108
	27	105	105	105
	#28	104	104	104
	29	101	100	101
	#30	99	97	99

IQ SCORES OF SUBJECTS

TABLE LXXXI

IQ SCORES FOR SUBJECTS IN THE GIRLS-BOYS COMPARISON AT GRADES 3 AND 6

N = 9 For Each Subgroup

IQ Subgroup	Matched Pairs			
	Grade 3		Grade 6	
	Girls	Boys	Girls	Boys
High				
	128	129	128	128
	129	129	129	128
	128	129	128	128
	120	122	126	126
	120	122	127	126
	120	121	126	126
	112	112	124	124
	111	112	124	123
	113	112	124	123
Middle				
	111	111	119	121
	109	111	119	120
	111	111	119	121
	109	108	114	114
	109	111	114	114
	109	108	114	114
	103	103	114	114
	100	103	114	114
	106	102	115	114
Low				
	97	97	108	108
	97	97	111	109
	100	96	108	108
	95	96	104	105
	95	96	104	105
	96	95	104	105
	92	91	99	101
	92	91	97	100
	89	92	99	101

THE PROFESSIONAL WRITERS' SAMPLE

Baldwin, James *Go Tell It on the Mountain*
Barth, John *The Sotweed Factor*
Bellow, Saul *The Adventures of Augie March*
Clark, Walter Van Tilburg *The Ox-Bow Incident*
Ellison, Ralph *The Invisible Man*
Farrell, James *Studs Lonigan*
Faulkner, William *Absalom, Absalom*!
Ferber, Edna *Grant*
Heller, Joseph *Catch-22*
Hemingway, Ernest *A Farewell to Arms*
Horgan, Paul *A Distant Trumpet*
Lee, Harper *To Kill a Mockingbird*
Lewis, Sinclair *Arrowsmith*
Michener, James *Hawaii*
O'Hara, John *Ten North Frederick*
Porter, Katherine *Pale Horse, Pale Rider*
Salinger, Jerome *Catcher in the Rye*
Steinbeck, John *The Grapes of Wrath*
Thurber, James *The Thurber Carnival*
Uris, Leon *Exodus*
Wharton, Edith *The House of Mirth*
Welty, Eudora *The Ponder Heart*
Wescott, Glenway *The Pilgrim Hawk*
Wolfe, Thomas *Look Homeward, Angel*
Wouk, Herman *The Caine Mutiny*

INSTRUCTIONS FOR THE WRITING SESSION

After introductions, the following instructions were given in a conversational manner:

"At the University of Nebraska we are very interested in the sorts of things boys and girls like to write about. For the past two years we have been collecting hundreds of stories which were written by children in Grades 2, 3, 4, 5, and 6.

We do not have as many third- and sixth-grade stories as we would like so we are asking you to write stories for us today. *You may write your story about anything you wish. It can be real or imaginary, a story of long ago or today, or about people or animals—just whatever you want to write about. Of course, we want it to be your own story, not one you've read or seen on television. It takes a little time to think about the kind of story you want to write, doesn't it? We have a film for you to watch while you're trying to decide what you want to write about. You may get an idea from the film, but, of course, we don't want you to tell the exact story of the film. It wouldn't be your own story then, would it?*

The film you will be viewing is not really a story--the only words used are right at the beginning. The film is about the sights you might see before a rain shower, during the shower, and after the rain shower is over."

(Show film. After film, repeat part between asterisks, then conclude with the following instructions.)

"We are more interested in your ideas than anything else, so don't worry too much about correct spelling and punctuation. We will help you spell any words you need, if you want us to. We will write the words on the small slips of paper we have provided. You will have 40 minutes to write your story, so do not feel that you have to rush. If your pencil breaks or you need another sheet of paper, raise your hand. When you finish, leave your story on your desk and work quietly on your (assignment previously given by regular teacher)."

A GLOSSARY OF TERMINOLOGY USED IN THE SYNTACTIC ANALYSIS

T-unit

Simple or complex sentence. Since the punctuation of children is sometimes erratic, each independent clause is treated as a separate sentence with dependent clauses attached to the most appropriate clause.

Sentence

Throughout this study, sentence is synonymous with T-unit.

Sentence Pattern

Any one of the first nine sentence types listed below.

Sentence Type

One of the following varieties of sentences:

1. 1 2 (Subject - verb)
2. 1 2 4 (Subject - verb - direct object)
3. 1 2 3 4 (Subject - verb - indirect object - direct object)
4. 1 2 4 6 (Subject - verb - direct object - noun objective complement)
5. 1 2 4 6A (Subject - verb - direct object - adjective objective complement)
6. 1 2B 5 (Subject - linking verb - noun complement)
7. 1 2B 5A (Subject - linking verb - adjective complement)
8. 1 2P (Subject - passive verb)
9. T1 2B 1 (Expletive - verb - subject)
10. W or Question (Interrogative sentences)
11. Inverted Sentences or Inversions (Sentences which have one or more major slots out of normal subject - verb - object order)
12. Compound Predicates (Sentences which have more than one predicate with a single subject)

Verbal Phrase

A structure consisting of a verbal and its subject, object, complement, or modifier. The phrase functions as a unit filling some noun, adjective, or adverbial slot. When the verbal is part of a verb phrase it is not considered a verbal phrase.

M

A movable adverbial slot, either a word, phrase, or clause.

F

A fixed adverbial slot, either a word, phrase, or clause.

M1, F1

An adverbial slot at the beginning of its clause, preceding the subject.

M2, F2

An adverbial slot following the first major clause slot, usually coming between subject and verb.

M3, F3

An adverbial slot between parts of a divided verb slot.

M4, F4

An adverbial slot following the verb when clause slots appear in regular order, or following the second major slot when there is an inversion.

M5, F5

An adverbial slot following an object or complement, thus terminal.

Slot

A grammatical segment functioning as a unit. The slot may be either a word, phrase, or clause. It is a single structure in constituent analysis at one level, but may be subdivided into its component parts at another level. Thus, subjects, verbs, objects, subordinate clauses, and prepositional phrases are all slots.

Constituent Analysis

A process of dividing and subdividing syntactic structures into simpler components. (See the examples below. See also R. Longacre, "String Constituent Analysis," Language, XXXVI, 1960.)

Levels

The number of times a sentence can undergo successive constituent analysis, a process which subdivides slots into progressively smaller components. Each of the examples below has four levels.

(1)	I	think	it	is	the	very	best	time	of	the	year.
1st level	subj	verb	object								
2nd level			subj	linking verb	complement						
3rd level					determiner	adv	adj	head noun	prep phrase		
4th level									prep	determiner	head noun

(2)

	We	shot	at	the	planes	making	every	shot	count.
1st level	subj	verb	prepositional phrase			participial phrase			
2nd level			prep	det	head noun	parti- ciple	object		
3rd level							subject		infin
4th level							adj	head noun	

(3)

	When	he	reached	the	edge	of	the	forest	he	was	scared.
1st level	movable adverbial clause								subj	linking verb	pred adj
2nd level	Sub- ord conj	subj	verb	object							
3rd level				det	head noun	prep phrase					
4th level						prep	det	head noun			

APPENDIX F

EXAMPLES OF SENTENCE TYPES TAKEN FROM CHILDREN'S WRITING

Type

1 2

One spring morning some birds flew down to his hole.
Ducks like to swim in the water.
I was in the spaceship.
He went to the forest.
One day he was walking along a half torn up road.
We are heading toward a faraway planet named planet Unknown.

1 2 4

One day Harry saw a river.
A fox likes to eat many things.
He had a little brother named Si.
One night the keeper forgot to lock the monkey's cage.
They would get one hour for gym.
He and his friend Bud Scott have many scientific adventures together.

1 2 3 4

I will bring you back anything you want.
The farmer told him to call the sheep.
She had promised me a dog.
Once my friend Jim asked me if I wanted to go swimming with him.
Billy told his father he was going home.

1 2 4 6

Mostly we just call him Kitty or animal.
She named one Sam.
I'll name her Fifi.
We named him that because, he is white as snow, and likes to curl up like a Snowball.

1 2 4 6A

You might not think that so unusual.
Most boxers have their ears pointed up.
And we got ours free.

1 2B 5

Sam was the fastest pony in the village.
I am a baby fox.
It was a sunny day when Babe was born.
His name was Bill.
The gunslinger was a tough man.
He is the bad boy of the class.

1 2B 5A

My cat is big and black.
Soon the baby birds will be able to fly.
He was very rich.
He was very unhappy being separated from his mother.
The ocean was rough.
The story I have to tell is true.

1 2P

One day a new store was opened.
I got splashed a little bit.
He was going to be whipped!!!
He was caught by the zoo.
The horses were used for plowing, and for the children to ride.

T1

Once upon a time there was one little girl.
There is a duck in the story.
Once up in the heavens there was a lovely Goddess.
Once upon a time there was a king who wanted to fly.
After he was out there for a few peaceful days there was trouble.
Once there was a fish who was bigger and more lively than the rest.

W (Question)

What are you going to do on your birthday?
Her mother said, "Do you want a pet?"
The monkey said, "What did you do that for?"
How would you like to go?
"Oh do I have to?"
When do we leave? said Mark.

Inverted Sentences

Once lived a boy who always wanted a dog.
One she named Tam.
In the sand hills of Nebraska, which incidentally are good mostly for beef cattle, lived a very unusual cow.
Once upon a time lived a beautiful princess.
Underneath the roots of a giant tree sleeps White Lighting.

Compound Predicate

Every Saturday she would go to market and buy things.
He came out of his spaceship and saw the monsters.
One day Josh gathered up two other cats and held a meeting.
Then they found a old woman and brought her to the king.
I bought a box of shells and went to the farm that next day, to go hunting.
Joe had much experience and could lay the cable faster than anyone else in the telephone company.

EXAMPLE OF THE COMPOSITION ANALYSIS
GRADE 3

Funny Faces

```
       One day Mr. Jay Bird wanted to have some fun.  So he went to the store and got 15 funny faces
       ------- ------------                ---------             ------------         --------------
          M1         1        2               4       &  1   2        F4       +   2         4
        AJ  HN                              D    HN             (P)  D    HN          AJ   AJ    HN

to make everybody laugh.  So he went home and put one on which had a blue eye and a black eye with a
------------------------                          ---    -------------------------------------------
        M5                &   1   2   F4   +   2  4N(2)                4
 (IF)    4                                        HPN    c
        ----------------                                 -------------------------------------------
            1      (IF)                                    1    2          4
                                                                   -------------------------------------
                                                                   D   AJ   HN + D    AJ   HN  P----

green tongue and a red nose.  One little frog said look at that funny face and it laughed and laughed
----------------------------  ---------------      -----------------------
                                     1          2            4              &  1     2     +     2
                               AJ    AJ    HN       (1)  2- 2- 4
----------------------------                               ---------------
                                                             D     AJ   HN
----------------------------
----------------------------

and laughed.  When he got home he forgot and left the rest of the funny face's in the box and could
              ---- -----------                    ---------------------------- ----------
 +      2            M1        1    2      +   2                    4              F5      +
                ‡   1   2  F4                       D  HN   P                  (P) D   HN
                                                          ---------------------
                                                          (P)    D  AJ    HN

not find the key.
         --------
       2    4
           D  HN
```

EXAMPLE OF THE COMPILATION OF INDIVIDUAL SCORES

TABLE LXXXII

TOTAL M'S AND F'S
INDIVIDUAL SCORES FOR MIDDLE IQ SUBGROUP
AT GRADE 3

Subject	Group A			Group B			Group C		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
1	0	15	15	10	21	11	6	8	2
2	9	13	4	13	22	9	17	17	0
3	16	29	13	28	21	- 7	10	20	10
4	1	5	4	2	5	3	13	9	- 4
5	8	3	- 5	11	13	2	26	16	-10
6	3	9	6	13	10	- 3	8	12	4
7	22	26	4	11	10	- 1	11	15	4
8	9	13	4	2	7	5	17	13	- 4
9	0	6	6	2	7	5	3	13	10
10	5	24	19	7	16	9	3	10	7
Total frequency	73	143	70	99	132	33	114	133	19

STATISTICAL TESTS

I. Wilcoxon Matched-Pairs Signed-Ranks Test (For additional information, see Sidney Siegel's Nonparametric Statistics for the Behavioral Sciences, New York: McGraw Hill Co., Inc., 1956, pp. 75-83.)

$$\text{Mean} = \mu T = \frac{N(N+1)}{4}$$

$$\text{Standard deviation} = \sigma T = \sqrt{\frac{N(N+1)(2N+1)}{24}}$$

$$z = \frac{T - \mu_T}{\sigma T} = \frac{T - \frac{N(N+1)}{4}}{\sqrt{\frac{N(N+1)(2N+1)}{24}}}$$

II. Analysis of Covariance (For additional information, see Allen Edwards' Experimental Design in Psychological Research, New York: Holt, Rinehart and Winston, 1962, pp. 289-94.)

$$S_1 = \sum y_w^2 - \sum_1^k \frac{\left(\sum_1^n xy_k\right)^2}{\sum_1^n x_k^2}$$

$$S_2 = \sum y_w^2 - \frac{(\sum xy_w)^2}{\sum x_w^2}$$

$$S_3 = S_2 - S_1$$

$$S_4 = \sum y_t^2 - \frac{(\sum xy_t)^2}{\sum x_t^2}$$

$$S_5 = S_4 - S_2$$

$$F = \frac{\frac{S_5}{k - 1}}{\frac{S_2}{k(n - 1) - 1}}$$

III. The Spearman Rank Correlation Coefficient (For additional information, see Sidney Siegel's Nonparametric Statistics for the Behavioral Sciences, New York: McGraw Hill Co., Inc., 1956, pp. 202-13.)

$$r_s = 1 - \frac{6 \sum_{i=1}^{N} d_i^{2}}{N^3 - N}$$

For Tied Observations:

$$\sum x2 = \frac{N^3 - N}{12} - \sum T_x$$

$$\sum y2 = \frac{N^3 - N}{12} - \sum T_y$$

$$r_s = \frac{\sum x^2 + \sum y^2 - \sum d^2}{2\sqrt{\sum x^2 \sum y^2}}$$

TABLE LXXXIII

SENTENCE TYPES
FREQUENCIES OF PRE- AND POST-COMPOSITIONS AND GAIN BY IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADE 3

N= 10 For Each Subgroup

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
1 2 Pattern												
A	27	51	24	26	45	19	37	35	- 2	90	131	41
B	30	48	18	48	28	-20	19	45	26	97	121	24
C	63	25	-38	38	42	4	28	22	- 6	129	89	-40
1 2 4 Pattern												
A	39	51	12	21	63	42	37	46	9	97	160	63
B	27	49	22	48	42	- 6	21	27	6	96	118	22
C	77	78	1	45	56	11	51	47	- 4	173	181	8
1 2 3 4 Pattern												
A	3	4	1	8	4	- 4	1	9	8	12	17	5
B	1	1	0	3	7	4	6	4	- 2	10	12	2
C	4	0	- 4	0	4	4	3	2	- 1	7	6	- 1
1 2 4 6 Pattern												
A	0	4	4	0	1	1	0	1	1	0	6	6
B	0	0	0	0	0	0	0	0	0	0	0	0
C	2	0	- 2	1	0	- 1	1	0	- 1	4	0	- 4

TABLE LXXXIII (continued)

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
1 2 4 6A Pattern												
A	0	1	1	0	0	0	0	0	0	0	1	1
B	0	0	0	0	0	0	0	0	0	0	0	0
C	0	0	0	0	0	0	0	0	0	0	0	0
1 2B 5 Pattern												
A	11	25	14	10	17	7	15	18	3	36	60	24
B	8	10	2	4	9	5	10	14	4	22	33	11
C	11	14	3	14	16	2	12	11	-1	37	41	4
1 2B 5A Pattern												
A	5	7	2	12	14	2	2	10	8	19	31	12
B	12	15	3	5	9	4	9	11	2	26	35	9
C	21	10	-11	17	16	-1	10	10	0	48	36	-12
1 2P Pattern												
A	1	0	-1	0	2	2	2	5	3	3	7	4
B	1	1	0	2	0	-2	1	3	2	4	4	0
C	0	1	1	1	0	-1	1	0	-1	2	1	-1

TABLE LXXXIII (continued

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
T1 Pattern												
A	4	4	0	1	2	1	4	5	1	9	11	2
B	4	4	0	5	10	5	7	7	0	16	21	5
C	3	10	7	7	6	- 1	4	6	2	14	22	8
Inverted Sentences												
A	5	0	- 5	0	7	7	1	3	2	6	10	4
B	2	2	0	2	0	- 2	5	1	- 4	9	3	- 6
C	2	0	- 2	2	0	- 2	0	1	1	4	1	- 3
Questions												
A	2	4	2	3	5	2	0	4	4	5	13	8
B	1	4	3	2	4	2	2	3	1	5	11	6
C	6	3	- 3	1	1	0	0	3	3	7	7	0
Compound Predicates												
A	11	16	5	3	13	10	4	9	5	18	38	20
B	15	9	- 6	11	13	2	7	6	- 1	33	28	- 5
C	18	16	- 2	6	11	5	3	1	- 2	27	28	1

TABLE LXXXIV

SENTENCE TYPES
FREQUENCIES OF PRE- AND POST-COMPOSITIONS AND GAIN BY IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADE 6
N= 10 For Each Subgroup

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
1 2 Pattern												
A	76	90	14	49	50	1	65	62	- 3	190	202	12
B	69	69	0	51	66	15	46	43	- 3	166	178	12
C	61	75	14	83	82	- 1	63	67	4	207	224	17
1 2 4 Pattern												
A	57	86	29	73	82	9	60	71	11	190	239	49
B	41	64	23	65	62	- 3	61	74	13	167	200	33
C	68	75	7	109	83	-26	76	89	13	253	247	- 6
1 2 3 4 Pattern												
A	11	5	- 6	5	3	- 2	5	5	0	21	13	- 8
B	6	2	- 4	7	3	- 4	5	1	- 4	18	6	-12
C	5	5	0	4	4	0	8	6	- 2	17	15	- 2
1 2 4 6 Pattern												
A	3	2	- 1	1	1	0	0	1	1	4	4	0
B	0	0	0	0	1	1	0	0	0	0	1	1
C	0	1	1	0	2	2	4	0	- 4	4	3	- 1

TABLE LXXXIV (continued)

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
1 2 4 6A Pattern												
A	0	1	1	1	0	- 1	0	0	0	1	1	0
B	0	0	0	0	0	0	0	0	0	0	0	0
C	2	0	- 2	1	0	- 1	0	0	0	3	0	- 3
1 2B 5 Pattern												
A	23	35	12	17	21	4	25	31	6	65	87	22
B	20	20	0	20	25	5	16	20	4	56	65	9
C	33	17	-16	32	26	- 6	23	26	3	88	69	-19
1 2B 5A Pattern												
A	16	33	17	22	12	-10	19	27	8	57	72	15
B	22	13	- 9	10	14	4	14	12	- 2	46	39	- 7
C	22	10	-12	21	12	- 9	11	17	6	54	39	-15
1 2P Pattern												
A	2	4	2	0	1	1	3	6	3	5	11	6
B	5	5	0	1	4	3	2	1	- 1	8	10	2
C	4	3	- 1	28	7	-21	6	5	- 1	38	15	-23

TABLE LXXXIV (continued)

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
T1 Pattern												
A	12	5	- 7	8	5	- 3	13	5	- 8	33	15	-18
B	8	3	- 5	8	8	0	6	9	3	22	20	- 2
C	3	6	3	6	2	- 4	6	4	- 2	15	12	- 3
Inverted Sentences												
A	3	11	8	7	6	- 1	9	4	- 5	19	21	2
B	2	0	- 2	4	2	- 2	1	4	3	7	6	- 1
C	6	5	- 1	10	4	- 6	0	9	9	16	18	2
Questions												
A	6	12	6	7	4	- 3	2	4	2	15	20	5
B	2	3	1	3	4	1	0	3	3	5	10	5
C	5	8	3	8	2	- 6	9	4	- 5	22	14	- 8
Compound Predicates												
A	17	30	13	22	16	- 6	20	20	0	59	66	7
B	18	32	14	20	24	4	11	15	4	49	71	22
C	12	15	3	26	22	- 4	11	23	12	49	60	11

TABLE LXXXV

MEAN OF DIFFERENT SENTENCE TYPES USED IN PRE- AND POST-COMPOSITIONS AND GAIN BY IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADE 3

N= 10 For Each Subgroup

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
A	4.7	5.1	.4	3.4	4.7	1.3	3.6	5.0	1.4	11.7	14.8	3.1
B	4.9	4.2	-.7	4.1	4.5	.4	4.0	4.6	.6	13.0	13.3	.3
C	4.9	5.0	.1	4.2	5.1	.9	3.4	4.0	.6	12.5	14.1	1.6

TABLE LXXXVI

MEAN OF DIFFERENT SENTENCE TYPES USED IN PRE- AND POST-COMPOSITIONS AND GAIN BY IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADE 6

N= 10 For Each Subgroup

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
A	6.6	7.0	.4	6.3	5.6	-.7	6.4	6.2	-.2	19.3	18.8	-.5
B	6.2	5.6	-.6	5.9	5.8	-.1	5.2	5.5	.3	17.3	16.9	-.4
C	6.1	6.1	.0	6.6	5.8	-.8	6.1	6.2	.1	18.8	18.1	-.7

TABLE LXXXVII

SUBORDINATE CLAUSES
FREQUENCIES OF PRE- AND POST-COMPOSITIONS AND GAIN BY IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADE 3

N= 10 For Each Subgroup

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
Adverbial Clauses												
A	12	19	7	4	12	8	4	15	11	20	46	26
B	19	30	11	6	13	7	2	17	15	27	60	33
C	30	24	- 6	8	7	- 1	19	13	- 6	57	44	-13
Adjective Clauses												
A	4	5	1	0	2	2	2	4	2	6	11	5
B	2	7	5	8	6	- 2	4	0	- 4	14	13	- 1
C	7	6	- 1	3	5	2	3	4	1	13	15	2
Noun Clauses												
A	17	22	5	7	17	10	2	14	12	26	53	27
B	10	20	10	4	7	3	4	6	2	18	33	15
C	14	9	- 5	3	11	8	8	6	- 2	25	26	1
Total Subordinate Clauses												
A	33	46	13	11	31	20	8	33	25	52	110	58
B	31	57	26	18	26	8	10	23	13	59	106	47
C	51	39	-12	14	23	9	30	23	- 7	95	85	-10

TABLE LXXXVIII

SUBORDINATE CLAUSES
FREQUENCIES OF PRE- AND POST-COMPOSITIONS AND GAIN BY IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADE 6
N= 10 For each Subgroup

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
Adverbial Clauses												
A	41	42	1	28	45	17	23	35	12	92	122	30
B	18	26	8	34	23	-11	33	25	- 8	85	74	-11
C	31	37	6	39	30	- 9	26	25	- 1	96	92	- 4
Adjective Clauses												
A	14	16	2	8	10	2	13	16	3	35	42	7
B	8	7	- 1	20	16	- 4	13	7	- 6	41	30	-11
C	14	20	6	19	10	- 9	15	23	8	48	53	5
Noun Clauses												
A	38	43	5	25	24	- 1	21	29	8	84	96	12
B	26	13	-13	27	19	- 8	28	20	- 8	81	52	-29
C	27	30	3	41	29	-12	21	35	14	89	94	5
Total Subordinate Clauses												
A	93	101	8	61	79	18	57	80	23	211	260	49
B	52	46	- 6	81	58	-23	74	52	-22	207	156	-51
C	72	87	15	99	69	-30	62	83	21	233	239	6

TABLE LXXXIX

VERBAL PHRASES
FREQUENCIES OF PRE- AND POST-COMPOSITIONS AND GAIN BY IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADE 3
N= 10 For Each Subgroup

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
Infinitive Phrases												
A	9	11	2	5	11	6	5	14	9	19	36	17
B	6	3	- 3	14	6	- 8	9	4	- 5	29	13	-16
C	22	6	-16	4	5	1	2	5	3	28	16	-12
Gerund Phrases												
A	0	4	4	1	2	1	1	1	0	2	7	5
B	1	1	0	0	1	1	1	0	- 1	2	2	0
C	0	0	0	0	2	2	1	0	- 1	1	2	1
Present Participial Phrases												
A	1	3	2	0	0	0	1	0	- 1	2	3	1
B	0	1	1	1	0	- 1	0	1	1	1	2	1
C	1	1	0	0	0	0	0	0	0	1	1	0
Past Participial Phrases												
A	0	1	1	0	1	1	1	1	0	1	3	2
B	2	3	1	2	2	0	0	2	2	4	7	3
C	3	2	- 1	2	0	- 2	1	0	- 1	6	2	- 4
Total Verbal Phrases												
A	10	19	9	6	14	8	8	16	8	24	49	25
B	9	8	- 1	17	9	- 8	10	7	- 3	36	24	-12
C	26	9	-17	6	7	1	4	5	1	36	21	-15

TABLE XC

VERBAL PHRASES
FREQUENCIES OF PRE- AND POST-COMPOSITIONS AND GAIN BY IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADE 6

N= 10 For Each Subgroup

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
Infinitive Phrases												
A	23	17	- 6	11	20	9	27	20	- 7	61	57	- 4
B	25	25	0	19	21	2	23	11	-12	67	57	-10
C	21	24	3	18	8	-10	15	22	7	54	54	0
Gerund Phrases												
A	2	6	4	2	2	0	4	13	9	8	21	13
B	2	3	1	2	4	2	4	1	- 3	8	8	0
C	6	6	0	4	4	0	3	5	2	13	15	2
Present Participial Phrases												
A	6	7	1	4	8	4	3	14	11	13	29	16
B	3	3	0	4	0	- 4	2	0	- 2	9	3	- 6
C	15	20	5	6	6	0	2	5	3	23	31	8
Past Participial Phrases												
A	3	5	2	2	4	2	5	9	4	10	18	8
B	2	5	3	5	6	1	4	4	0	11	15	4
C	2	5	3	2	3	1	1	1	0	5	9	4
Total Verbal Phrases												
A	34	35	1	19	34	15	39	56	17	92	125	33
B	32	36	4	30	31	1	33	16	-17	95	83	-12
C	44	55	11	30	21	- 9	21	33	12	95	109	14

TABLE XCI

ADVERBIALS
FREQUENCIES OF PRE- AND POST-COMPOSITIONS AND GAIN BY IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADE 3
N= 10 For Each Subgroup

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
M1												
A	32	48	16	23	45	22	34	39	5	89	132	43
B	30	45	15	24	49	25	27	39	12	81	133	52
C	50	54	4	38	33	- 5	31	17	-14	119	104	-15
M2, M3												
A	5	7	2	1	2	1	1	0	- 1	7	9	2
B	1	2	1	4	7	3	1	2	1	6	11	5
C	1	10	9	0	6	6	2	3	1	3	19	16
M4												
A	6	5	- 1	0	6	6	1	9	8	7	20	13
B	6	9	3	3	4	1	2	2	0	11	15	4
C	6	2	- 4	1	5	4	3	7	4	10	14	4

TABLE XCI (continued)

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
M5												
A	14	25	11	13	16	3	6	13	7	33	54	21
B	21	20	- 1	6	15	9	3	17	14	30	52	22
C	43	19	-24	18	20	2	24	9	-15	85	48	-37
Total M												
A	57	85	28	37	69	32	42	61	19	136	215	79
B	58	76	18	37	75	38	33	60	27	128	211	83
C	100	85	-15	57	64	7	60	36	-24	217	185	-32
F1, F2, F3												
A	2	2	0	0	1	1	0	3	3	2	6	4
B	1	1	0	4	1	- 3	4	0	- 4	9	2	- 7
C	0	3	3	1	2	1	0	1	1	1	6	5
F4												
A	36	68	32	30	53	23	47	32	-15	113	153	40
B	40	67	27	50	45	- 5	30	51	21	120	163	43
C	75	40	-35	46	52	5	30	20	-10	151	112	-39

TABLE XCI (continued)

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
F5												
A	4	19	15	6	20	14	5	12	7	15	51	36
B	13	16	3	8	11	3	1	5	4	22	32	10
C	18	26	8	10	15	5	15	14	- 1	43	55	12
Total F												
A	42	89	47	36	74	38	52	47	- 5	130	210	80
B	54	84	30	62	57	- 5	35	56	21	151	197	46
C	93	69	-24	57	69	12	45	35	-10	195	173	-22
Total M, F												
A	99	174	75	73	143	70	94	108	14	266	425	159
B	112	160	48	99	132	33	68	116	48	279	408	129
C	193	154	-39	114	133	19	105	71	-34	412	358	-54
Total M4, M5, F4, F5												
A	60	117	57	49	95	46	59	66	7	168	278	110
B	80	112	32	67	75	8	36	75	39	183	262	79
C	142	87	-55	75	92	17	72	50	-22	289	229	-60

TABLE XCII

ADVERBIALS
FREQUENCIES OF PRE- AND POST-COMPOSITIONS AND GAIN BY IQ SUBGROUPS
OF GROUPS A, B, AND C AT GRADE 6
N= 10 For Each Subgroup

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
M1												
A	77	79	2	60	71	11	56	56	0	193	206	13
B	57	69	12	51	51	0	46	59	13	154	179	25
C	67	57	-10	71	58	-13	54	58	4	192	173	-19
M2, M3												
A	14	18	4	8	8	0	6	16	10	28	42	14
B	8	15	7	10	10	0	7	5	- 2	25	30	5
C	13	22	9	7	12	5	7	11	4	27	45	18
M4												
A	13	15	2	8	12	4	3	8	5	24	35	11
B	8	13	5	9	10	1	7	4	- 3	24	27	3
C	19	28	9	15	10	- 5	14	11	- 3	48	49	1

TABLE XCII (continued)

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
M5												
A	52	37	-15	24	34	10	33	50	17	109	121	12
B	33	42	9	36	25	-11	53	21	-32	122	88	-34
C	37	51	14	49	36	-13	34	34	0	120	121	1
Total M												
A	156	149	- 7	100	125	25	98	130	32	354	404	50
B	106	139	33	106	96	-10	113	89	-24	325	324	- 1
C	136	158	22	142	116	-26	109	114	5	387	388	1
F1, F2, F3												
A	6	5	- 1	6	8	2	7	5	- 2	19	18	- 1
B	4	2	- 2	10	5	- 5	5	3	- 2	19	10	- 9
C	3	6	3	5	6	1	3	8	5	11	20	9
F4												
A	99	120	21	78	90	12	89	105	16	266	315	49
B	129	115	-14	101	91	-10	71	75	4	301	281	-20
C	78	124	46	122	101	-21	88	102	14	288	327	39

TABLE XCII (continued)

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
F5												
A	22	27	5	18	24	6	18	24	6	58	75	17
B	7	19	12	26	34	8	22	22	0	55	75	20
C	30	24	- 6	36	22	-14	15	36	21	81	82	1
Total F												
A	127	152	25	102	122	20	114	134	20	343	408	65
B	140	136	- 4	137	130	- 7	98	100	2	375	366	- 9
C	111	154	43	163	129	-34	106	146	40	380	429	49
Total M, F												
A	283	301	18	202	247	45	212	264	52	697	812	115
B	246	275	29	243	226	-17	211	189	-22	700	690	-10
C	247	312	65	305	245	-60	215	260	45	767	817	50
Total M4, M5 F4, F5												
A	186	199	13	128	160	32	143	187	44	457	546	89
B	177	189	12	172	160	-12	153	122	-31	502	471	-31
C	164	227	63	222	169	-53	151	183	32	537	579	42

TABLE XCIII

PREPOSITIONAL PHRASES
FREQUENCIES OF PRE- AND POST-COMPOSITIONS AND GAIN BY IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

N= 10 For Each Subgroup

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
						At Grade 3						
Prepositional Phrases												
A	59	88	29	46	78	32	50	56	6	155	222	67
B	59	68	9	59	76	17	31	57	26	149	201	52
C	84	87	3	61	84	23	46	37	- 9	191	208	17
						At Grade 6						
A	148	203	55	110	136	26	118	149	31	376	488	112
B	158	156	- 2	132	152	20	124	109	-15	414	417	3
C	144	183	39	185	153	-32	149	167	18	478	503	25

TABLE XCIV

SENTENCE LEVELS
FREQUENCIES OF PRE- AND POST-COMPOSITIONS AND GAIN BY IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6
N= 10 For Each Subgroup

Group	High			Middle			Low			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
					At Grade 3							
T-units												
Level 3 and Higher												
A	41	58	17	26	44	18	20	40	20	87	142	55
B	34	48	14	39	41	2	25	30	5	98	119	21
C	58	48	-10	30	36	6	38	27	-11	126	111	-15
Level 4 and Higher												
A	11	12	1	4	11	7	2	5	3	17	28	11
B	11	9	- 2	9	9	0	5	4	- 1	25	22	- 3
C	15	10	- 5	3	9	6	4	3	- 1	22	22	0
					At Grade 6							
Level 3 and Higher												
A	108	132	24	80	86	6	87	105	18	275	323	48
B	93	95	2	96	91	- 5	95	69	-26	284	255	-29
C	107	121	14	132	92	-40	88	113	25	327	326	- 1
Level 4 and Higher												
A	24	47	23	24	22	- 2	21	40	19	69	109	40
B	29	21	- 8	27	23	- 4	30	22	- 8	86	66	-20
C	38	48	10	38	25	-13	29	36	7	105	109	4

TABLE XCV

SENTENCE TYPES
Z SCORES FOR WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST FOR TOTAL GROUPS AT GRADES 3 AND 6

N= 60 In Each Comparison

	Z Score					
	A - B		A - C		B - C	
Sentence Type	Grade 3	Grade 6	Grade 3	Grade 6	Grade 3	Grade 6
1 2	.618*	.041	2.342*	.118	1.378*	.389
1 2 4	1.320*	.431*	1.650*	1.425*	.744*	.660*
1 2 3 4	.781*	.563*	1.216*	.653	.690*	1.306
1 2 4 6	1.818*	.406	.363*	.106*	1.595*	1.268*
1 2 4 6A	-----[a]	------	------	1.756*	------	1.595*
1 2B 5	.787*	.248	1.177*	1.479*	.557*	1.489*
1 2B 5A	.243*	.341*	2.050*	1.614*	1.561*	.660*
1 2P	.418*	3.114*	.560*	1.870*	.406*	.733*
T1	.399*	1.748	.608	1.948	.544	.100*
Inverted Sentences	.965*	.462*	.933*	-----	.254	.062
W(Question)	.419*	.260*	1.036*	1.064*	.628*	.921*
Compound Predicates	2.342*	1.777	1.490*	.349	.211	.701*

*Denotes superior performance of A > B, A > C, or B > C. Items without asterisk show the reverse significance, i.e., B > A, C > A, or C > B.

[a] Comparison impossible because of infrequency of use.

TABLE XCVI

SUBORDINATE CLAUSES
Z SCORES FOR WILCOXON MATCHED-PAIRS SIGNED-RANK TEST
FOR TOTAL GROUPS AT GRADES 3 AND 6

N= 60 In Each Comparison

	Z Score					
	A - B		A - C		B - C	
Subordinate Clauses	Grade 3	Grade 6	Grade 3	Grade 6	Grade 3	Grade 6
Adverb	.456	1.580*	2.438*	1.802*	3.314*	.414
Adjective	1.017*	.795*	.816*	.190*	.479	.787
Noun	1.206*	1.752*	2.649*	.216*	.330*	1.143
Total	1.549*	2.821*	3.087*	1.225*	2.857*	1.573

*Denotes superior performance of A > B, A > C, or B > C. Items without asterisk show the reverse relationship, i.e., B > A, C > A, or C > B.

TABLE XCVII

VERBAL PHRASES
Z SCORES FOR WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST FOR TOTAL GROUPS AT GRADES 3 AND 6

N= 60 In Each Comparison

	Z Score					
	A - B		A - C		B - C	
Verbal Phrases	Grade 3	Grade 6	Grade 3	Grade 6	Grade 3	Grade 6
Infinitive	2.615*	.375*	2.450*	.143	.528	.571
Gerund	2.844*	1.810*	.977*	.912*	.912	.260
Present Participle	1.184*	2.240*	.315*	.768*	.364*	2.433
Past Participle	.315	.596*	1.376*	.827*	1.540*	.117*
Total	2.554*	1.762*	3.267*	1.016*	.410*	.952

*Denotes superior performance of A >B, A >C, or B >C. Items without asterisk show the reverse significance, i.e., B >A, C >A, or C >B.

TABLE XCVIII

ADVERBIALS
Z SCORES FOR WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST FOR TOTAL GROUPS AT GRADES 3 AND 6

N= 60 In Each Comparison

	Z Score					
	A - B		A - C		B - C	
Adverbial	Grade 3	Grade 6	Grade 3	Grade 6	Grade 3	Grade 6
M1	.456	.504	1.345*	1.273*	2.357*	1.741*
M2, M3	.117	.660*	1.758	.243	1.344	.914
M4	.799*	.501*	1.071*	.850*	.021	.062*
M5	.266	1.667*	2.426*	.096	2.857*	1.309
Total M	.276	1.511*	2.879*	1.946*	3.039*	.022
F1, F2, F3	.795*	1.041*	.244	1.199	1.476	2.259
F4	.142*	1.110*	2.259*	.143	1.633*	1.384
F5	2.126*	.174*	1.472*	.570*	.677*	.808*
Total F	1.340*	1.777*	2.594*	.021*	1.394*	1.211
Total M, F	.648*	1.384*	3.060*	.431*	2.834*	.421
Total M4, M5, F4, F5	.825*	1.285*	3.369*	.497*	2.630*	.627

*Denotes superior performance of A >B, A > C, or B >C. Items without asterisk show the reverse relationship, i.e., B > A, C > A, or C > B.

TABLE XCIX

PREPOSITIONAL PHRASES
Z SCORES FOR WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST
FOR TOTAL GROUPS AT GRADES 3 AND 6
N= 60 In Each Comparison

	Z Score					
	A - B		A - C		B - C	
Element	Grade 3	Grade 6	Grade 3	Grade 6	Grade 3	Grade 6
Prepositional Phrases	.250*	2.681*	.774*	1.600*	.469*	.273

*Denotes superior performance of A > B, A > C, or B > C. Items without the asterisk show the reverse relationship, i.e., B > A, C > A, or C > B.

TABLE C

SENTENCE LEVELS
Z SCORES FOR WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST
FOR TOTAL GROUP AT GRADES 3 AND 6
N= 60 In Each Comparison

	Z Score					
	A - B		A - C		B - C	
T-unit	Grade 3	Grade 6	Grade 3	Grade 6	Grade 3	Grade 6
Level 3 and Higher	1.271*	2.470*	2.755*	1.850*	1.113*	.685
Level 4 and Higher	1.783*	2.982*	1.485*	1.681*	.069	2.649

*Denotes superior performance of A > B, A > C, or B > C. Items without the asterisk show the reverse relationship, i.e., B > A, C > A, or C > B.

TABLE CI

Z SCORES FOR WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST FOR IQ SUBGROUPS AT GRADES 3 AND 6

N= 20 In Each Comparison

Element	Z Score					
	A - B		A - C		B - C	
	Grade 3	Grade 6	Grade 3	Grade 6	Grade 3	Grade 6
Variations of Sentence Patterns						
High	1.454*	1.481*	1.272*	.118*	.700	.840
Middle	.888*	.533	.533*	.059	.910	.917*
Low	.840*	.545	1.190*	.177	.181	.181*
Subordinate Clauses						
High	.140*	.611*	2.665*	.662*	2.251*	1.184
Middle	1.125*	2.089*	.840*	1.954*	.533*	.490*
Low	.770*	2.488*	2.242*	.280*	2.170*	2.293
Verbal Phrases						
High	1.260*	.236	2.803*	.407	2.030*	.177
Middle	2.545*	.917*	1.007*	1.427*	1.818	.909*
Low	1.120*	2.140*	1.244*	.651*	.560	2.701
Adverbials						
High	1.007*	.296	2.089*	1.019	2.073*	.305
Middle	1.325*	1.274*	2.250*	1.885*	.815*	1.244*
Low	.888	1.478*	1.121*	.203*	2.132*	1.599
Prepositional Phrases						
High	.651*	2.140*	.177*	.592*	.177*	1.109
Middle	.917*	.592*	.296*	1.375*	.254	1.658*
Low	1.066	1.783*	.815*	.407*	2.363*	1.066
T-units Level 4 and Higher						
High	.818*	1.244*	1.363*	2.344*	.909*	1.260
Middle	1.260*	1.125*	.254*	.177*	1.181	.713*
Low	1.995*	.651*	.909*	2.369*	.181	1.545

*Denotes superior performance of A > B, A > C, or B > C. Items without an asterisk show the reverse relationship, i.e., B > A, C > A, or C > B.

TABLE CII

Z SCORES FOR WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST FOR GIRLS AND BOYS AT GRADES 3 AND 6

N= 27 Girls And 27 Boys In Each Comparison

	Z Scores	
Element	Girls-Boys Grade 3	Girls-Boys Grade 6
Varieties of Sentences Patterns	1.694*	2.088*
Subordinate Clauses	1.459*	3.302*
Verbal Phrases	1.474*	.107
Adverbials	1.295*	2.967*
Prepositional Phrases	.685*	1.143*
T-units Level 4 and Higher	.402*	1.018*

*Denotes superior performance of girls over boys. Items without an asterisk show the reverse relationship, i.e., boys over girls.

TABLE CIII

Z SCORES FOR WILCOXON MATCHED-PAIRS SIGNED-RANKS TEST FOR GIRLS AND BOYS BY IQ SUBGROUPS AT GRADES 3 AND 6

N= 9 Girls And 9 Boys In Each Comparison

Element	Z Scores	
	Girls-Boys Grade 3	Girls-Boys Grade 6
Variations of Sentence Patterns		
High	.236*	1.718*
Middle	1.400*	2.380*
Low	.980*	1.818*
Total Subordinate Clauses		
High	1.718*	1.125*
Middle	.636*	2.030*
Low	1.181*	2.488*
Total Verbal Phrases		
High	.909	.592
Middle	1.820*	1.007*
Low	1.617*	.181
Total Adverbials		
High	1.066*	1.007*
Middle	.770*	.059*
Low	.140	2.665*
Prepositional Phrases		
High	.296	.118*
Middle	1.362*	.651
Low	.280	1.680*
T-units Level 4 and Higher		
High	.545*	1.181*
Middle	.181	.350
Low	1.006*	.980*

*Denotes superior performance of girls over boys. Items without an asterisk show the reverse relationship, i.e., boys over girls.

TABLE CIV

1 2 3 4 PATTERN
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
				High IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
2.4%	.7%	.0%	1.1%	1.6%	.9%	2.3%	1.6%	1.6%
(4)[b]	(1)	(0)	(5)	(5)	(2)	(5)	(12)	(8)
				Middle IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
2.3%	5.7%	2.6%	3.4%	1.5%	1.4%	1.6%	1.5%	1.6%
(4)	(7)	(4)	(15)	(3)	(3)	(4)	(10)	(8)
				Low IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
6.3%	3.3%	1.9%	4.1%	2.1%	.5%	2.4%	1.8%	1.6%
(9)	(4)	(2)	(15)	(5)	(1)	(6)	(12)	(8)

[a] Total sentences written by subgroup

[b] Frequency of 1 2 3 4 pattern

TABLE CV

1 2 4 6 PATTERN
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
2.4%	0	0	.9%	.6%	0	.5%	.4%	.2%
(4)[b]	(0)	(0)	(4)	(2)	(0)	(1)	(3)	(1)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
.6%	0	0	.2%	.5%	.5%	.8%	.6%	.2%
(1)	(0)	(0)	(1)	(1)	(1)	(2)	(4)	(1)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
.7%	0	0	.3%	.4%	0	0	.1%	.2%
(1)	(0)	(0)	(1)	(1)	(0)	(0)	(1)	(1)

[a] Total sentences written by subgroup

[b] Frequency of 1 2 4 6 pattern

TABLE CVI

1 2 4 6A PATTERN
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
.6% (1)[b]	0 (0)	0 (0)	.2% (1)	.3% (1)	0 (0)	0 (0)	.1% (1)	.8% (4)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	.8% (4)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	.8% (4)

[a] Total sentences written by subgroup

[b] Frequency of 1 2 4 6A pattern

TABLE CVII

1 2B 5 PATTERN
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
				High IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
14.9% (25)[b]	7.0% (10)	8.9% (14)	10.5% (49)	11.1% (35)	9.5% (20)	7.7% (17)	9.7% (72)	9.4% (47)
				Middle IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
9.8% (17)	7.4% (9)	10.5% (16)	9.4% (42)	10.4% (21)	11.7% (25)	10.6% (26)	10.9% (72)	9.4% (47)
				Low IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
12.5% (18)	11.6% (14)	10.7% (11)	11.7% (43)	13.1% (31)	11.0% (20)	10.4% (26)	11.5% (77)	9.4% (47)

[a] Total sentences written by subgroup

[b] Frequency of 1 2B 5 pattern

TABLE CVIII

1 2B 5A PATTERN
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
4.2% (7)[b]	10.5% (15)	6.4% (10)	6.8% (32)	10.5% (33)	6.2% (13)	4.5% (10)	7.5% (56)	11.4% (57)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
8.1% (14)	7.4% (9)	10.5% (16)	8.7% (39)	6.0% (12)	6.6% (14)	4.9% (12)	5.8% (38)	11.4% (57)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
6.9% (10)	9.1% (11)	9.7% (10)	8.4% (31)	11.4% (27)	6.6% (12)	6.8% (17)	8.4% (56)	11.4% (57)

[a] Total sentences written by subgroup

[b] Frequency of 1 2B 5A pattern

TABLE CIX

1 2P PATTERN
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
0 (0)[b]	.7% (1)	.6% (1)	.4% (2)	1.3% (4)	2.4% (5)	1.4% (3)	1.6% (12)	1.8% (9)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
1.2% (2)	0 (0)	0 (0)	.4% (2)	.5% (1)	1.9% (4)	2.9% (7)	1.8% (12)	1.8% (9)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
3.5% (5)	2.5% (3)	0 (0)	2.2% (8)	2.5% (6)	.5% (1)	2.0% (5)	1.8% (12)	1.8% (9)

[a] Total sentences written by subgroup

[b] Frequency of 1 2P pattern

TABLE CX

T1 PATTERN
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
				High IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
2.4% (4)[b]	2.8% (4)	6.4% (10)	3.8% (18)	1.6% (5)	1.4% (3)	2.7% (6)	1.9% (14)	3.8% (19)
				Middle IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
1.2% (2)	8.2% (10)	3.9% (6)	4.0% (18)	2.5% (5)	3.8% (8)	.8% (2)	2.3% (15)	3.8% (19)
				Low IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
3.5% (5)	5.8% (7)	5.8% (6)	4.9% (18)	2.1% (5)	4.9% (9)	1.6% (4)	2.7% (18)	3.8% (19)

[a] Total sentences written by subgroup

[b] Frequency of T1 pattern

TABLE CXI

INVERTED SENTENCES
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
				High IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
0	1.4%	0	.4%	3.5%	0	2.3%	2.1%	3.4%
(0)[b]	(2)	(0)	(2)	(11)	(0)	(5)	(16)	(17)
				Middle IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
4.0%	0	0	1.6%	3.0%	.9%	1.6%	1.8%	3.4%
(7)	(0)	(0)	(7)	(6)	(2)	(4)	(12)	(17)
				Low IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
2.1%	.8%	1.0%	1.4%	1.7%	2.2%	3.6%	2.5%	3.4%
(3)	(1)	(1)	(5)	(4)	(4)	(9)	(17)	(17)

[a] Total sentences written by subgroup

[b] Frequency of Inverted Sentences

TABLE CXII

W (QUESTIONS)
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
2.4% (4)[b]	2.8% (4)	1.9% (3)	2.4% (11)	3.9% (12)	1.4% (3)	3.6% (8)	3.1% (23)	.8% (4)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
2.9% (5)	3.3% (4)	.7% (1)	2.2% (10)	2.0% (4)	1.9% (4)	.8% (2)	1.5% (10)	.8% (4)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
2.8% (4)	2.5% (3)	2.9% (3)	2.7% (10)	1.7% (4)	1.6% (3)	1.6% (4)	1.6% (11)	.8% (4)

[a] Total sentences written by subgroup

[b] Frequency of W (Questions)

TABLE CXIII

COMPOUND PREDICATES
PERCENTAGE AND FREQUENCY OF OCCURRENCE
IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS
OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
				High IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
9.5% (16)[b]	6.3% (9)	10.2% (16)	8.8% (41)	9.6% (30)	15.2% (32)	6.8% (15)	10.3% (77)	10.8% (54)
				Middle IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
7.5% (13)	10.7% (13)	7.2% (11)	8.2% (37)	8.0% (16)	11.3% (24)	8.9% (22)	9.4% (62)	10.8% (54)
				Low IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
6.3% (9)	5.0% (6)	1.0% (1)	4.3% (16)	8.5% (20)	8.2% (15)	4.2% (23)	8.7% (58)	10.8% (54)

[a] Total sentences written by subgroup

[b] Frequency of Compound Predicates

TABLE CXIV

ADVERBIAL CLAUSES
PERCENTAGE AND FREQUENCY OF OCCURRENCE
IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS
OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
11.3% (19)[b]	21.0% (30)	15.3% (24)	15.6% (73)	13.4% (42)	12.3% (26)	16.8% (37)	14.1% (105)	19.2% (96)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
6.9% (12)	10.7% (13)	4.6% (7)	7.2% (32)	22.4% (45)	10.8% (23)	12.2% (30)	14.8% (98)	19.2% (96)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
10.4% (15)	14.0% (17)	12.6% (13)	12.2% (45)	14.8% (35)	13.7% (25)	10.0% (25)	12.7% (85)	19.2% (96)

[a] Total sentences written by subgroup

[b] Frequency of Adverbial Clauses

TABLE CXV

ADJECTIVE CLAUSES
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
				High IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
3.0% (5)[b]	4.9% (7)	3.8% (6)	3.8% (18)	5.1% (16)	3.3% (7)	9.1% (20)	5.8% (43)	8.0% (40)
				Middle IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	668	500
1.2% (2)	4.9% (6)	3.3% (5)	2.9% (13)	5.0% (10)	7.5% (16)	4.1% (10)	5.5% (36)	8.0% (40)
				Low IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
2.8% (4)	0 (0)	3.9% (4)	2.2% (8)	6.8% (16)	3.8% (7)	9.2% (23)	6.9% (46)	8.0% (40)

[a] Total sentences written by subgroup

[b] Frequency of Adjective Clauses

TABLE CXVI

NOUN CLAUSES
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
13.1%	14.0%	5.7%	10.9%	13.7%	6.2%	13.6%	11.5%	16.8%
(22)[b]	(20)	(9)	(51)	(43)	(13)	(30)	(86)	(84)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
9.8%	5.7%	7.2%	7.8%	11.9%	8.9%	11.8%	10.9%	16.8%
(17)	(7)	(11)	(35)	(24)	(19)	(29)	(72)	(84)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
9.7%	5.0%	5.8%	7.1%	12.3%	11.0%	14.0%	12.6%	16.8%
(14)	(6)	(6)	(26)	(29)	(20)	(35)	(84)	(84)

[a] Total sentences written by subgroup

[b] Frequency of Noun Clauses

TABLE CXVII

INFINITIVE PHRASES
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
				High IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
6.5% (11)[b]	2.1% (3)	3.8% (6)	4.3% (20)	5.4% (17)	11.8% (25)	10.9% (24)	8.9% (66)	7.2% (36)
				Middle IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
6.4% (11)	4.9% (6)	3.3% (5)	4.9% (22)	10.0% (20)	9.9% (21)	3.3% (8)	7.4% (49)	7.2% (36)
				Low IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
9.7% (14)	3.3% (4)	4.9% (5)	6.3% (23)	8.5% (20)	6.0% (11)	8.8% (22)	7.9% (53)	7.2% (36)

[a] Total sentences written by subgroup

[b] Frequency of Infinitive Phrases

TABLE CXVIII

GERUND PHRASES
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
2.4%	.7%	0	1.1%	1.9%	1.4%	2.7%	2.0%	5.6%
(4)[b]	(1)	(0)	(5)	(6)	(3)	(6)	(15)	(28)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
1.2%	.8%	1.3%	1.1%	.1%	1.9%	1.6%	1.5%	5.6%
(2)	(1)	(2)	(5)	(2)	(4)	(4)	(10)	(28)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
.7%	0	0	.3%	5.5%	.5%	2.0%	2.8%	5.6%
(1)	(0)	(0)	(1)	(13)	(1)	(5)	(19)	(28)

[a] Total sentences written by subgroup

[b] Frequency of Gerund Phrases

TABLE CXIX

PRESENT PARTICIPIAL PHRASES
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
				High IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
1.8% (3)[b]	.7% (1)	.6% (1)	1.1% (5)	2.2% (7)	1.4% (3)	9.1% (20)	4.0% (30)	12.8% (64)
				Middle IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
0 (0)	0 (0)	0 (0)	0 (0)	4.0% (8)	0 (0)	2.4% (6)	2.1% (14)	12.8% (64)
				Low IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
0 (0)	.9% (1)	0 (0)	.3% (1)	5.9% (14)	0 (0)	2.0% (5)	2.8% (19)	12.8% (64)

[a] Total sentences written by subgroup

[b] Frequency of Present Participial Phrases

TABLE CXX

PAST PARTICIPIAL PHRASES
PERCENTAGE AND FREQUENCY OF OCCURRENCE
IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS
OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
.6% (1)[b]	2.1% (3)	1.3% (2)	1.3% (6)	1.6% (5)	2.4% (5)	2.3% (5)	2.1% (15)	15.4% (77)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
.6% (1)	1.6% (2)	0 (0)	.7% (3)	2.0% (4)	2.8% (6)	1.2% (3)	2.0% (13)	15.4% (77)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
.7% (1)	1.7% (2)	0 (0)	.9% (3)	3.8% (9)	2.2% (4)	.4% (1)	2.1% (14)	15.4% (77)

[a] Total sentences written by subgroup

[b] Frequency of Past Participial Phrases

TABLE CXXI

Ml's
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	200	745	500
28.6% (48)[b]	31.0% (45)	34.4% (54)	31.4% (147)	25.2% (79)	32.7% (69)	25.9% (57)	27.5% (205)	24.2% (121)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
26.0% (45)	40.2% (49)	21.7% (33)	28.4% (127)	35.3% (71)	23.9% (51)	23.6% (58)	27.3% (180)	24.2% (121)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
27.1% (39)	32.2% (39)	16.5% (17)	25.8% (95)	23.7% (56)	32.4% (59)	23.2% (58)	26.0% (173)	24.2% (121)

[a] Total sentences written by subgroup

[b] Frequency of Ml's

TABLE CXXII

M2's, M3's
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
				High IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
4.2% (7)[b]	1.4% (2)	6.4% (10)	4.1% (19)	5.7% (18)	7.1% (15)	10.0% (22)	7.4% (55)	8.2% (41)
				Middle IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
1.2% (2)	5.7% (7)	3.9% (6)	3.4% (15)	4.0% (8)	4.7% (10)	4.9% (12)	4.5% (30)	8.2% (41)
				Low IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
0 (0)	1.7% (2)	2.9% (3)	1.4% (5)	6.8% (16)	2.7% (5)	4.4% (11)	4.8% (32)	8.2% (41)

[a] Total sentences written by subgroup

[b] Frequency of M2's, M3's

TABLE CXXIII

M4's
PERCENTAGE AND FREQUENCY OF OCCURRENCE
IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS
OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
3.0% (5)[b]	6.2% (9)	1.3% (2)	3.4% (16)	4.8% (15)	6.2% (13)	12.7% (28)	7.5% (56)	21.8% (109)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
3.5% (6)	3.3% (4)	3.3% (5)	3.4% (15)	6.0% (12)	4.7% (10)	4.1% (10)	4.8% (32)	21.8% (109)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
6.3% (9)	1.7% (2)	6.8% (7)	4.9% (18)	3.4% (8)	2.2% (4)	4.4% (11)	3.4% (23)	21.8% (109)

[a] Total sentences written by subgroup

[b] Frequency of M4's

TABLE CXXIV

Fl's, F2's, F3's
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
				High IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
1.2%	.7%	1.9%	1.3%	1.6%	.9%	2.7%	1.7%	3.0%
(2)[b]	(1)	(3)	(6)	(5)	(2)	(6)	(13)	(15)
				Middle IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
.6%	.8%	1.3%	.9%	4.0%	2.3%	2.4%	2.9%	3.0%
(1)	(1)	(2)	(4)	(8)	(5)	(6)	(19)	(15)
				Low IQ				
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
2.1%	0	1.0%	1.1%	2.1%	1.6%	3.2%	2.4%	3.0%
(3)	(0)	(1)	(4)	(5)	(3)	(8)	(16)	(15)

[a] Total sentences written by subgroup

[b] Frequency of Fl's, F2's, F3's

TABLE CXXV

F5's
PERCENTAGE AND FREQUENCY OF OCCURRENCE IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
11.3% (19)[b]	11.0% (16)	16.6% (26)	13.0% (61)	8.6% (27)	9.0% (19)	10.9% (24)	9.4% (70)	16.0% (80)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
11.6% (20)	9.0% (11)	9.9% (15)	10.2% (46)	11.9% (24)	16.0% (34)	8.9% (22)	12.1% (80)	16.0% (80)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
8.3% (12)	4.1% (5)	13.6% (14)	8.4% (31)	10.2% (24)	12.1% (22)	14.4% (36)	12.3% (82)	16.0% (80)

[a] Total sentences written by subgroup

[b] Frequency of F5's

TABLE CXXVI

TOTAL M4, M5, F4, F5
PERCENTAGE AND FREQUENCY OF OCCURRENCE
IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS
OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
69.6% (117)[b]	77.2% (112)	55.4% (87)	67.5% (316)	63.4% (199)	89.6% (189)	103.2% (227)	82.6% (615)	143.8% (719)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
173	122	152	447	201	213	246	660	500
54.9% (95)	61.5% (75)	60.5% (92)	58.6% (262)	79.6% (160)	75.1% (160)	68.7% (169)	74.1% (489)	143.8% (719)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
45.7% (66)	62.0% (75)	48.5% (50)	51.9% (191)	79.3% (187)	67.0% (122)	73.2% (183)	72.8% (486)	143.8% (719)

[a] Total sentences written by subgroup

[b] Frequency of Total M4, M5, F4, F5

TABLE CXXVII

TOTAL M's, F's
PERCENTAGE AND FREQUENCY OF OCCURRENCE
IN HIGH, MIDDLE, AND LOW IQ SUBGROUPS
OF GROUPS A, B, AND C AT GRADES 3 AND 6

Grade 3				Grade 6				Pro Writers
High IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
168[a]	143	157	468	314	211	220	745	500
103.6% (174)[b]	110.3% (160)	98.1% (154)	104.3% (488)	95.5% (301)	130.3% (275)	141.8% (312)	119.2% (888)	173.8% (869)
Middle IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N-30	N=25
173	122	152	447	201	213	246	600	500
82.7% (143)	108.2% (132)	87.5% (133)	91.3% (408)	122.9% (247)	106.1% (226)	99.6% (245)	108.8% (718)	173.8% (869)
Low IQ								
A	B	C	Total	A	B	C	Total	
N=10	N=10	N=10	N=30	N=10	N=10	N=10	N=30	N=25
144	121	103	368	236	182	250	668	500
75.0% (108)	95.9% (116)	68.9% (71)	80.2% (295)	111.9% (264)	103.8% (189)	104.0% (260)	109.6% (732)	173.8% (869)

[a] Total sentences written by subgroup

[b] Frequency of Total M's, F's

A DESCRIPTION OF THE THREE TREATMENT PROGRAMS

PROGRAM A (Experimental I)

Program A, the intensive-treatment program, was taught by Nell Thompson and Donald Nemanich who worked together as a teacher-team. A Curriculum for English[1] was used as the basis of the language program. Previous research indicated that A Curriculum for English is a commendable, workable language arts program for the elementary school. Many children enrolled in schools using the curriculum were found to display above-average syntactic skills. Program A was designed to further test the curriculum materials and to answer the question: How much syntactic growth might take place if the materials in the units were utilized to the fullest degree by teachers who have had more than the usual amount of training in literature, linguistics, and rhetoric?

Each of the units selected was taught intensively and extensively--all of the suggestions were incorporated; nothing was left out. Additional materials were prepared by the team leader, Nell Thompson, to further intensify the treatment--to clinch the concepts developed in the units, to further explore the ideas contained in the units. (No denial is made of the fact that the "Hawthorne effect" may very well have contributed to the success of Program A. Both teachers were "sold" on the program; one of the teachers had used the curriculum materials for two years and had witnessed tangible proof of its merits, not the least of which was the enthusiastic response of the pupils and their "hither-to-unheard-of" recognition of language class as an exciting, "looked-forward-to" part of the school day.)

The Program A teachers met with the students on Monday, Tuesday, and Thursday mornings. A total of 180 minutes per week was spent with the sixth-grade class and 150 minutes with the third-grade class. (The time was less in the third grade because more time was needed for reading, also a part of the language arts block-of-time.)

A daily record was kept of the progress of the experiment, the time spent on each activity, and of pupils' responses to various situations. The following information was taken from the Program A daily record:

Basic Curriculum: A Curriculum for English

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[1] A Curriculum for English, prepared by The Nebraska Curriculum Development Center (Lincoln, Nebraska: University of Nebraska Press, 1965).

Units Taught

Third Grade:	
Adventure Story	*Mr. Popper's Penguins*
Historical Fiction	*The Courage of Sarah Noble*
Animal Story	*The Blind Colt*
Myth	*Daedalus and Icarus* *Clytie* *Narcissus*
Sixth Grade:	
Other Lands and People	*Secret of the Andes*
Fanciful Tale	*A Wrinkle in Time*
Poetry	*The Poetry of Robert Frost*
Myth	*The Children of Odin*

Poetry was used extensively and brief review units on myth and fable were used. Special lessons were included at Halloween, Thanksgiving, and Christmas.

Supplementary Materials

The following were used as supplementary materials: Exercise materials (See Appendix L); *Time For Poetry*; *Golden Treasury of Poetry*; Films, records, transparencies, and pictures.

Literature Activities

Many concepts were developed and in a variety of ways. To mention a few: tone, point of view, style, symbolism, figurative language, simile, metaphor, personification, sensory impression, imagery, and alliteration.

Language Explorations

Attention was given to: the history and nature of language, dialect, phonology, code-writing and deciphering linguistic "research" (how words were pronounced in the community), intonation, spelling and dictionary skills, vocabulary games, exercises on sentence expansions and transformations, substitutions, coordination and subordination, inversions, other patterns, and specific structures, such as the appositive.

Oral Language Activities

Opportunities were provided for large and small group discussions, sharing of personal interests and hobbies, dramatization, and choral reading.

Composition

The pupils kept folders of their work for the semester. Many compositions were of paragraph length; often the focus was on single sentences; longer stories were written about twice a month. Letters were written; haiku, cinquain and other poems were written; diaries were kept as the children imagined themselves on a journey with one of the characters in the book being read. As the children wrote, they were given help with spelling, capitalization, and punctuation.

Comments

The children's language "cupboards" were never bare--they always had something of interest to write about because literature provided a common experience for all pupils. On one occasion, the third-grade children were given a letter and told they could copy the letter or use the letter only as a guide and write their own ideas. The hoped-for results were obtained--the children preferred using their own ideas. The sixth-grade pupils enjoyed writing original stories and often would write poetry of their own accord.

Approximately one-third of the time was spent reading the core text to the students; one-third was devoted to oral experiences; and one-third of the period was reserved for writing. Exercise materials were discussed and completed as a class activity; no assignments were given. Grades were never placed on compositions or papers of any sort; negative comments were withheld--it was hoped that the focus on positive aspects only would provide the stimulus for improvement.

The Program A teachers both felt that the experience was a rewarding one. The pupils were responsive and appeared to enjoy language class. The regular teachers, the principal, assistant principal, and all school personnel were very cooperative. The experiment was considered a success, but it was thought that it could have been even more successful. Neither of the teachers felt they were able to give the pupils the individual help that was needed; both felt that, in the elementary school, the person teaching English classes must have at least two hours a day with each group of students, which means that reading and social studies probably should also be taught by the language arts specialist. In addition to the restriction imposed by the time factor, the physical facilities were far from ideal. The classrooms were small, hardly large enough to accommodate the desks for the 33 pupils; it was almost impossible to rearrange the desks for group work or individual projects. In spite of these limitations, both the teachers and the children seemed to profit from the semester-long experiment.

Illustration of a Composition Exercise

Here are some examples of sentences which the sixth-grade Program A students wrote after having been given the following assignment:

Using Your Imagination

Which of the following sentences might a scientist have written? a poet? an ancient believer in gods and goddesses?

1. Clusters of paper-white narcissus filled the atmosphere with a fragrance that lingered with me for hours.
2. The goddess Nemesis was so angered by the conceit of the handsome Narcissus that she changed him into a flower bearing his name.
3. The narcissus is a member of Old World bulbous herbs of the amaryllis family.

Follow the directions below as you write a sentence or two about a rainbow, lightning, a flower, a bird, or any other object or phenomenon.

1. First, imagine that you are an ancient believer in gods and goddesses.
2. Now, imagine that you are a scientist. Write about the same subject you chose for number 1 above.
3. Write about the same subject pretending that you are a famous poet.

* * * * *

Sentences Written by Girls

1. Freya wanted to be a butterfly, so she asked Odin if he would turn her into a butterfly and he did.
2. Butterfly--an insect with four large, usually bright parts of the wings.
3. A butterfly is like a good fairy dressed in her best gown, fluttering around with her delicate beauty.

* * *

1. Humming bird: one of the beautiful goddesses would always hum, never stopping, so the great Odin changed her into a humming bird.
2. Humming bird: one of the smallest birds in the world. The humming is caused by the movement of the wings.
3. I saw the humming bird small and shy
I could understand his humming. It was something about a fly.

* * *

1. Rainbow: Loki stole Frigga's beautiful necklace. As he ran to earth, he dropped it in the sky.
2. Rainbow--colors formed by the reflection of the sun's rays on rain, spray or mist.
3. An arc of sparkling colors,
Stretching through the skies,
Ending in shadowy mist.

1. Lightning: After Loki had cut off Sif's hair, Odin was very angry and so he sent lightning bolts.
2. Flashes of lightning are produced by a discharge of electricity from one cloud to another.
3. Lightning: Crooked yellow fingers streaked the patch of black as bright as day.

Sentences Written by Boys

1. Lightning: The Gods were having a party and they were turning the lights off and on and spilling water all over the earth.
2. Lightning--flashing of light made by the discharge of electricity from one cloud to another.
3. It was lighting up the sky as if it were the Fourth of July.

* * *

1. Rats: The sons of Loki changed into little animals to bring trouble to earth.
2. Rats--small destructive animals found in every part of the world except the arctic. Member of the rodent family.
3. There is a sneaky animal
It's sort of like a bat.
It's wingless though,
It's very quick,
And it is called a rat.

* * *

1. Loki was in trouble so he changed into a butterfly and went down to earth for a while.
2. A butterfly comes from the moth family. There are many species of butterflies.
3. Butterfly: Just a little burnt piece of paper with colorful little dots all around and two little antennas trying to communicate.

* * *

1. Tree. Cronus was bragging that he could reach higher than anyone so Odin turned him into a tree.
2. Tree--a large, woody perennial plant commonly 10 feet or more high.
3. Giants with colors bright and arms swinging in the wind on a fall evening.

PROGRAM B (Experimental II)

Program B, the moderate-treatment program, was taught by the regular classroom teachers. Approximately 150 minutes per week were devoted to the language program.

Basic Curriculum: A Curriculum for English

In addition, the teachers used one or more of the following supplementary materials and aids.

Supplementary Materials

Using Good English	Laidlaw	1961
Using Good English	Laidlaw	1964
Workbook for Using Good English	Laidlaw	1961
Keys to Good Language	Economy	1958
Mastering Good English	Continental	
Hayes Language Drills and Tests		
Spell Correctly	Silver-Burdette	
Cavalcades	Scott Foresman	
Weekly Reader		
Junior Scholastics		

Also listed were:

- films
- filmstrips
- records
- tapes
- transparencies
- teacher-made stories
- worksheets
- pictures
- usage charts
- charts
- felt board

PROGRAM C (Control)

In Program B, the control program, a textbook was used as the basis of the curriculum. The program was taught by the regular classroom teachers and approximately 165 minutes per week were devoted to the language class. In a survey of materials used, each teacher listed one or more of the following items:

Basic Textbooks

Building Better English	Row Peterson	1961
Our English Language	American Book Co.	1960
Learning Together	Macmillan	1954
Sharing Ideas	Macmillan	

Supplementary Materials

Mastering Good English	Continental	
Practice for English for Meaning	Workbooks	
Language Workbooks (Dawson)		
Hayes Drills and Tests		
Intermediate Manual	Omaha Public Schools	1962
Primary Manual		
Current Events	American Education	

Two of the classes were using Our Language Today (American Book Company, 1967) during the last two or three weeks of the research.

Also listed were:

- films
- records
- transparencies
- library books

charts for:
- punctuation
- letter writing
- outlining

EXERCISE MATERIALS USED IN PROGRAM A

The materials in Appendix L were used in the Program A Curriculum. Most of the materials were written by the investigator; however, in a few cases the exercises were taken from units of A Curriculum For English. In the following section, 46 examples of exercise materials are included, 24 of which were used in the third grade and the remaining 22 in the sixth grade. The grade level is designated by the Roman numeral appearing at the upper left corner of each exercise.

III - i SOME PARAGRAPHS TO READ Name ______________________

How do the following paragraphs differ? How old do you think the writer of each paragraph might be? Give reasons for your answers.

A. I have a dog. He is brown and white. He is a good dog. He name is Rover. I like Rover.

B. My dog Pepper doesn't like Halloween very much. Last year he saw a jack-o-lantern and he didn't like it and he ran away. I guess Pepper thought it would get him so he ran away and hid under the porch and didn't come out for a long time.

C. One day last fall I went hunting with my dad. We took our dog Ringo with us. This was the first time we had taken him hunting so we didn't know how he would work out. When my Dad shot the first pheasant, Ringo hid under the car. Soon he came out and decided to join in the fun. He retrieved the second pheasant and acted real proud of himself. After that he was never gun-shy again.

D. Old Shep was tired after his long tramp through the snow, but he was not too tired to wag his tail in gratitude as Mr. Fisher patted him affectionately. "Good work, Boy! You had those stragglers rounded up in no time," Mr. Fisher remarked as he opened the kitchen door. Shep entered the warm, cozy room, took five steps, flopped in front of the stove, gave out a low sigh, and promptly fell asleep, exhausted.

III - 2 SYNONYMS Name ______________________

Can you think of a descriptive phrase to use in place of these words?

1. snow ______________________

2. penguin ______________________

3. walked ______________________

4. food ______________________

III - 3 Listening to Sounds Name ______________________________

A. Fill the blanks in the following sentences by changing only the vowel sound of the underlined word and placing the new word in the blank:

1. Penguins love to ____________________where it is cold.
2. Mr. Popper made a hit in his ____________________.
3. Won't you sell me a ______________________?
4. Does that shoe fit your _____________________?
5. They both took a _______________________.
6. Captain Cook bit the book with his ____________________.

B. Do the following exercise in the same way, this time changing only the initial consonant sounds:

1. The penguins walked to the bus without making a ___________.
2. Captain Cook said "_______________________________".
3. The penguins became bold when it was _____________________.
4. A bear sat in a _______________________.
5. He bounced the ball off the ______________________.
6. Do you know when it will _______________________?

III 4

Name ______________________________

THE POLITE PENGUINS

by

Adelaide Love

Penguins are very polite, you know.
They live where it's usually forty below
And there's nothing but wind and ice and snow
But the penguins are very polite.

Whenever a vessel comes to explore
The land that few people have seen before,
The penguins all rush down to the shore.
Oh, the penguins are very polite!

In the black and white suits they always wear,
They stand with a dignified elegant air
And welcome the men with a freindly stare.
The penguins are very polite.

If they could, they would all say: "How do you do?"
And: "How does this climate agree with you?"
Or: "The sun will rise in a month or two."
Oh, the penguins are very polite!

--from The Children's Hour
(Chicago: Spencer Press, Inc.,1953)

III - 5 Name ______________________

CAN YOU COMBINE EACH OF THESE GROUPS OF SENTENCES INTO ONE SENTENCE?

1. The floors were covered with ice.
   The ice was smooth.

2. The penguins were funny.
   The penguins were little.
   The penguins became famous.

3. The neighbors brought in broths.
   The neighbors brought in jellies.
   The neighbors brought in other good things to eat.

4. The chicks were fuzzy creatures.
   The chicks were comical.
   The chicks were little.
   The chicks grew at a tremendous rate.

VI - 6 MAKING COMPARISONS

Name ______________________________

Can you complete each of the following familiar expressions? Now think of a new and different way to write the same idea.

1. as quick as ____________________ ____________________________________
____

2. as light as ____________________ ____________________________________
____

3. as hard as ____________________ ____________________________________
____

4. as dirty as ____________________ ____________________________________
____

5. as flat as ____________________ ____________________________________
____

6. as happy as ____________________ ____________________________________
____

7. as sly as ____________________ ____________________________________
____

8. as soft as ____________________ ____________________________________
____

9. as busy as ____________________ ____________________________________
____

10. as quiet as ____________________ ____________________________________
____

11. as dark as ____________________ ____________________________________
____

12. as white as ____________________ ____________________________________
____

III - 7 COMBINING IDEAS Name ____________ ____ ____

CAN YOU COMBINE EACH OF THESE GROUPS OF SENTENCES INTO ONE SENTENCE?

1. The warm light shone through the windows.
   The golden light shone through the windows.
   The light of the candles shone through the windows.

   ____

   ____

   ____

   ____

2. Thomas was tied nearby.
   Thomas was their horse.
   Thomas was brown.

   ____

   ____

   ____

   ____

3. They were walking.
   They came to a cabin.

   ____

   ____

   ____

   ____

III - 8 UNSCRAMBLING WORDS Name ______________________________

How good a weatherman are you? Can you unscramble these weather words?

1. iran ____________
2. nows ____________
3. dloc ____________
4. ogf ____________
5. ucold ____________
6. ramw ____________
7. eslet ____________
8. alih ____________

III - 9 PLAYACTING IS FUN Name ______________________________

NARRATOR.

At last it was quiet. The children were all in bed, and Sarah lay on her quilt by the fire. Mistress Robinson covered her up warmly, and for a moment she seemed a little like Sarah's mother.

MISTRESS ROBINSON.

So young, so young. A great pity!

SARAH.

I would like to have my cloak, if you please.

MISTRESS ROBINSON.

But you are warm . . . . .

SARAH.

I am a little cold . . . .now.

NARRATOR.

Mistress Robinson put the cloak over Sarah.

MISTRESS ROBINSON.

Have it your way, child. But your blood must be thin.

NARRATOR.

Sarah caught a fold of the cloak in her hand and held it tightly. As she closed her eyes she could see pictures against the dark. They were not comfortable pictures. Before her were miles and miles of trees. Trees, dark and fearful, trees crowding against each other, trees on and on, more trees and more trees. Behind the trees there were men moving . . . were they Indians? She held the warm material of the cloak even more closely.

SARAH

(Whispering to herself.) Keep up your courage, Sarah Noble. Keep up your courage.

NARRATOR

But it was quite a long time before she slept.

III - 10 DECEMBER POEMS Name ______________________

SNOW
by
Dorothy Aldis

The fenceposts wear marshmallow hats
On a snowy day;
Bushes in their night gowns
Are kneeling down to pray--
And all the trees have silver skirts
And want to dance away.

FALLING SNOW

(Unknown)

See the pretty snowflakes
Falling from the sky;
On the walk and housetop
Soft and thick they lie.

On the window-ledges
On the branches bare;
Now how fast they gather
Filling all the air.

SNOW
by
Alice Wilkins

The snow fell softly all the night.
It made a blanket soft and white.
It covered houses, flowers and ground,
But did not make a single sound!

III - 11 COMBINING IDEAS

Name ______________________________

USE THESE WORDS AS YOU COMBINE THE IDEAS IN THE SENTENCES BELOW:

AND
BUT
AFTER
BEFORE
IF
BECAUSE
WHEN
UNTIL

1. The Indians didn't use plates.
They didn't use good table manners.

2. Sarah was not afraid.
She wore her cloak.

3. Sarah said her prayers.
She put on her warm nightgown.

4. It was quite a long time.
Sarah went to sleep.

5. I will work on our new house.
You will not mind staying here alone.

6. Sarah wanted to go to Tall John's house.
She would not go.
Her father said she could.

WRITE A SENTENCE OF YOUR OWN USING ONE OF THE WORDS ABOVE TO COMBINE YOUR IDEAS.

____

____

____

____

____

III - 12 CHOOSING THE RIGHT WORD

Name ______________________________

Use one of the following words in each blank below:

fetch
horse
mush
wilderness
house
courage
quiet
cloak

1. Keep up your ______________________, Arabella.

2. Thomas, the brown __________________, was tied nearby.

3. "It is a beautiful warm _______________," said Abigail.

4. "I must go to _______________your mother," Sarah's father said.

5. Sarah's father built a ________________in the __________________.

6. Sarah was very ______________________as she stirred the

______________________for breakfast.

III - 13 CHRISTMAS POEMS Name ______________________

AN OLD CHRISTMAS GREETING

(Unknown)

Sing hey! Sing hey!
For Christmas Day;
Twine mistletoe and holly,
For frienship glows
In winter snows,
And so let's all be jolly.

by
Sir Walter Scott

Heap on more wood!--the wind is chill;
But let it whistle as it will,
We'll keep our Christmas merry still.

by
Christina Georgina Rossetti

Give me holly, bold and jolly,
Honest, prickly, shining holly;
Pluck me holly leaf and berry
For the day when I make merry.

THE CHRISTMAS PUDDING

(Unknown)

Into the basin put the plums
Stirabout, stirabout, stirabout!

Next the good white flour comes,
Stirabout, stirabout, stirabout!

Sugar and peel and eggs and spice,
Stirabout, stirabout, stirabout!

Mix them and fix them and cook them twice,
Stirabout, stirabout, stirabout!

III - 14 USING DESCRIBING WORDS

Name ____________________________

Choose one of these words to write in each blank below:

little
early
four
restless
grassy
long
big
black
wobbly
yellow
nervous

1. The pinnacles made ________________, ____________________ shadows on the ground.

2. The ______________________ mare was __________________ and ______________________.

3. She was in a __________________________ hollow.

4. The ____________________ sun touched the top of the rimrock.

5. He stood on ___________________ _________________ legs.

6. She nipped him with her _________________ ___________ teeth.

III - 15 WORDS THAT DESCRIBE Name ____________________

Can you think of a good describing word to go with each of these words?

1. ____________________ colt
2. ____________________ mare
3. ____________________ grass
4. ____________________ legs
5. ____________________ sun
6. ____________________ squirrel
7. ____________________ trees
8. ____________________ wolf
9. ____________________ eyes
10. ____________________ gulley
11. ____________________ snow
12. ____________________ teeth

III - 16 WORDS THAT DESCRIBE Name ____________________

How many words can you think of for each list?

Sight Sound

____________ ____________ ____________ ____________

____________ ____________ ____________ ____________

____________ ____________ ____________ ____________

____________ ____________ ____________ ____________

____________ ____________ ____________ ____________

____________ ____________ ____________ ____________

Taste Touch Smell

______________ ______________ ______________

______________ ______________ ______________

______________ ______________ ______________

______________ ______________ ______________

______________ ______________ ______________

III - 17 A POEM TO READ Name ______________________________

THE WOLF

by

Georgia R. Durston

When the pale moon hides and the wild wind wails,
And over the treetops the nighthawk sails,
The gray wolf sits on the world's far rim,
And howls: and it seems to comfort him.

The wolf is a lonely soul, you see
No beast in the wood, nor bird in the tree,
But shuns his path: in the windy gloom
They give him plenty and plenty of room.

So he sits with his long, lean face to the sky
Watching the ragged clouds go by.
There in the night, alone, apart,
Singing the song of his lone, wild heart.

Far away, on the world's dark rim
He howls, and it seems to comfort him.

III - 18 MAKING LONGER SENTENCES Name ____________________

The following sentences are not complete. How would you finish each one? Write your ending. Make certain you end each sentence with a mark of punctuation.

1. At first, Uncle Torwal wanted to shoot the blind colt , but_____
____
____

2. Uncle Torwal thought that it might be best to shoot him because
____
____

3. After Whitey fastened the noose around the colt's neck, ________
____
____

4. Confusion jumped up on the chair when ____________________
____
____

5. The sun began to shine, and ________________________
____
____

III - 19 MAKING LONGER SENTENCES Name ______________________

The following sentences are not complete. How would you finish each one? Write your ending. Make certain you end each sentence with a mark of punctuation.

1. Although the colt was blind, ______________________________

____

____

2. The mare stood by the water hole until ____________________

____

____

3. It was too wet to lie down, so _________________________

____

____

4. The blind colt was whinnying frantically, but ______________

____

____

5. He knew that he might freeze to death if __________________

____

____

III - 19 POETRY Name ______________________________

AN INTRODUCTION TO DOGS

Ogden Nash

The dog is man's best friend.
He has a tail on one end.
Up in front he has teeth.
And four legs underneath.

Dogs like to bark.
They like it best after dark.
They not only frighten prowlers away
But also hold the sandman at bay.

A dog that is indoors
To be let out implores.
You let him out and what then?
He wants back in again.

Dogs display reluctance and wrath
If you try to give them a bath.
They bury bones in hideaways
And half the time they trot sideaways.

They cheer up people who are frowning,
And rescue people who are drowning,
They also track mud on beds,
And chew people's clothes to shreds.

Dogs in the country have fun.
They run and run and run.
But in the city this species
Is dragged around on leashes.

Dogs are upright as a steeple
And much more loyal than people.

III - 20 POETRY Name ______________________

THE COWBOY'S LIFE

Attributed to James Barton Adams

The bawl of a steer,
To a cowboy's ear,
Is music of sweetest strain;
And the yelping notes
Of the gay coyotes
To him are a glad refrain.

For a kingly crown
In the noisy town
His saddle he wouldn't change;
No life so free
As the life we see
Way out on the Yaso range.

The rapid beat
Of his broncho's feet
On the sod as he speeds along,
Keeps living time
To the ringing rhyme
Of his rollicking cowboy song.

The winds may blow
And the thunder growl
Or the breezes may safely moan;--
A cowboy's life
Is a royal life,
His saddle his kingly throne.

III - 21 POETRY Name ______________________________

WHOOPEE TI YI YO, GIT ALONG LITTLE DOGIES

(Unknown)

As I walked out one morning for pleasure,
I spied a cow-puncher all riding alone;
His hat was throwed back and his spurs was a-jingling
And he approached me a-singin' this song,

Whoopee ti yi yo, git along little dogies,
It's your misfortune, and none of my own.
Whoopee ti yi yo, git along little dogies,
For you know Wyoming will be your new home.

Early in the spring we round up the dogies,
Mark and brand and bob off their tails;
Round up our horses, load up the chuck-wagon,
Then throw the dogies upon the trail.

It's whooping and yelling and driving the dogies;
Oh how I wish you would go on;
It's whooping and punching and go on little dogies,
For you know Wyoming will be your new home.

Some boys goes up the trail for pleasure,
But that's where you get it most awfully wrong:
For you haven't any idea the trouble they give us
While we go driving them along.

When the night comes on and we hold them on the bedground,
These little dogies that roll on so slow;
Roll up the herd and cut out the strays,
And roll the little dogies that never rolled before.

Your mother she was raised way down in Texas,
Where the jimson weed and sand-burrs grow;
Now we'll fill you up on prickly pear and cholla
Till you are ready for the trail to Idaho.

Oh, you'll be soup for Uncle Sam's Injuns;
"It's beef, heap beef," I hear them cry.
Git along, git along, git along little dogies,
You're going to be beef steers by and by.

III - 22 SAYING WORDS CLEARLY

Name ______________________________

The verses below are tongue twisters. Practice saying them quickly until you are able to say the words in each sentence clearly.

1. Peter Piper picked a peck of pickled peppers;
   A peck of pickled peppers Peter Piper picked;
   If Peter Piper picked a peck of pickled peppers,
   Where's the peck of pickled peppers Peter Piper picked?

2. A woman to her son did utter,
   "Go, my son, and shut the shutter."
   "The shutter's shut," the son did utter;
   "I cannot shut it any shutter."

3. How much wood could a woodchuck chuck
   If a woodchuck could chuck wood?
   As much wood as a woodchuck could
   If a woodchuck could chuck wood.

The sentences below are also tongue twisters.

1. The sun shines on the shop signs.
2. Betty bought a blue broom to brush the bricks.
3. She sells sea shells by the seashore.
4. Tim, the thin twin insmith, trims tin.
5. These gray geese are in a green field grazing.

III - 23 DESCRIBING WORDS Name ______________________________

From this list choose a describing word for each sentence below:

old
icy
terrible
marvelous
fat
orange
tremendous
darkened
fair
golden

1. It was a ________________ time for the Indians.

2. Snow fell from the ____________________ sky.

3. Lift your ________________________ hand from my people.

4. The Ice King told _____________________ tales.

5. Coolpujot was a very _______________ _______________ man with no bones.

6. Away Glooscap went over the waves at a __________________ speed.

7. He came to a grove of _______________ blossoms where many _________________________ maidens were dancing.

8. The Queen of summer had long ___________________ hair.

III - 24 CHOOSING THE BEST WORD Name ______________________________

Use these words to finish the letter:

powers class gods
myths goddesses scientists

Prescott School
Lincoln, Nebraska 68502
February 2, 1967

Dear Grandmother,

We are learning about mythology in our language ______________. Myths are stories about ______________ and ______________________________ or other make believe characters who have special ___________________.

Long ago people did not have ______________________ to help them understand about the sun, moon, and stars. They made up ___________________ to explain about these things and to explain about plants and animals.

Your grandchild,

On the next page, write a letter to someone telling him (or her) about our study of mythology. You may copy the letter above if you wish, or you may write your own ideas.

VI - 1 SOME PARAGRAPHS TO READ Name ____________________

How do the following paragraphs differ? How old do you think the writer of each paragraph might be? Give reasons for your answers.

A. I have a dog. He is brown and white. He is a good dog. He name is Rover. I like Rover.

B. My dog Pepper doesn't like Halloween very much. Last year he saw a jack-o-lantern and he didn't like it and he ran away. I guess Pepper thought it would get him so he ran away and hid under the porch and didn't come out for a long time.

C. One day last fall I went hunting with my dad. We took our dog Ringo with us. This was the first time we had taken him hunting so we didn't know how he would work out. When my Dad shot the first pheasant, Ringo hid under the car. Soon he came out and decided to join in the fun. He retrieved the second pheasant and acted real proud of himself. After that he was never gun-shy again.

D. Old Shep was tired after his long tramp through the snow, but he was not too tired to wag his tail in gratitude as Mr. Fisher patted him affectionately. "Good work, Boy! You had those stragglers rounded up in no time," Mr. Fisher remarked as he opened the kitchen door. Shep entered the warm, cozy room, took five steps, flopped in front of the stove, gave out a low sigh, and promptly fell asleep, exhausted.

VI - 2 SYNONYMS Name ____________________

Can you think of a descriptive phrase to use in place of these words?

1. mountain ____________________

____

2. river ____________________

____

3. llama ____________________

____

4. walked ____________________

____

5. sun ____________________

____

VI - 3 SUFFIXES

Name ______________________________

Which bases are bound? Which ones are free? Write B or F after each word. Write another word using the same suffix.

1. herder ______________________________
2. chieftain ______________________________
3. crisis ______________________________
4. barbarian ______________________________
5. million ______________________________
6. ambition ______________________________
7. initial ______________________________
8. error ______________________________
9. government ______________________________
10. etiquette ______________________________
11. leaflet ______________________________
12. management ______________________________
13. scholarship ______________________________
14. employee ______________________________
15. arthritis ______________________________

VI - 4 AFFIXES Name ______________________

How does each prefix or suffix change the meaning? Use each word in a sentence.

1. displeasure ______________________
2. disappear ______________________
3. uninvited ______________________
4. uncertain ______________________
5. unfamiliar ______________________
6. impatient ______________________
7. midday ______________________
8. streamlet ______________________
9. movement ______________________
10. golden ______________________
11. suddenly ______________________
12. request ______________________
13. return ______________________
14. midafternoon ______________________

VI - 5 PROOFREADING PRACTICE Name ____________________________

Can you find the two errors in each of the following sentences?

1. Their is several interesting and puzzling sentences in the story.

2. "If its closed, his hand, not mine, shall close it.

3. "It's almost as if noone is suposed to find it."

4. "The cost of that refusel lyes heavy on my heart."

5. "You're mind is in his keeping,"

6. "Greive not if your searching circels."

7. "The boys thoughts was whirling like the foaming rapids."

8. "Lama-humming sounds like wind over water"

9. "Curiousity can leep the highest wall."

10. "ten thousand llamas disapeared from the earth forever."

VI - 6 MAKING COMPARISONS Name ____________________

Can you complete each of the following familiar expressions? Now think of a new and different way to write the same idea.

1. as quick as __________ ____________________

____

2. as light as __________ ____________________

____

3. as hard as __________ ____________________

____

4. as dirty as __________ ____________________

____

5. as flat as __________ ____________________

____

6. as happy as __________ ____________________

____

7. as sly as __________ ____________________

____

8. as soft as __________ ____________________

____

9. as busy as __________ ____________________

____

10. as quiet as __________ ____________________

____

11. as dark as __________ ____________________

____

12. as white as __________ ____________________

____

VI 7 - VOCABULARY

Name ______________________

crouched
pestle
parched
fascinated
seeped
dense
ancient
gratitude
shallow
clamor
hoarded
pleasure
stately
gourd
pillar
hacienda
adobe

wandering
vague
terrified
dank
squinted
gigantic
fondness
constant
narrow
frugal
affection
marred
arrogantly
terrace
nobility
turban
poncho

VI - 8 ADDING MORE INFORMATION Name ____________________

Read each of these sentences without the underlined part. What did you discover? Now read each sentence with the underlined part added. What purpose is served by the added part?

In the space provided, write a sentence of your own similar to the examples given.

A. 1. Suncca, the thin gray shepherd dog, came to sit beside him.

2. Misti, the young.black llama that was Cusi's own, came close.

3. It was night again when they arrived at Condor Kuncca, the Indian shelter.

4. The sun, a giant ball of fire, rose in majesty.

5. Cusi, the shepherd boy, wiping the sweat from his face with a thin brown arm, was not a boy of the highland meadows.

____

____

____

B. 1. They walked along in silence, a comfortable silence.

2. He could see a city built of walls, of walls of gray stone.

____

____

C. 1. At a word from the woman he went again into the hut and brought out goat's milk, yellow and rich and warm.

2. Smell of wet earth, so thick it left Cusi panting, hung heavy throughout the way.

3. Then patches of blue sky could be seen, and snow peaks, sharp and pointed and sparkling against the blue.

4. Mountain peak upon mountain peak, sheer and hard and glistening in frozen mantles of ice and snow, encircled them.

____

____

____

VI - 9 EXPANDING SENTENCES Name ______________________________

How do these sentences differ? Examine the sentences carefully, then write sentences of your own similar to 1(c) and 2(c).

1. (a) Sandy and Dennys were disgusted.

   (b) Sandy and Dennys, her ten-year-old twin brothers, were disgusted.

   (c) Sandy and Dennys, her ten-year-old twin brothers, who got home from school an hour earlier than she did, were disgusted.

____

____

____

____

____

2. (a) Even Charles Wallace was asleep.

   (b) Even Charles Wallace, the "dumb baby brother," was asleep.

   (c) Even Charles Wallace, the "dumb baby brother," who had an uncanny way of knowing when she was awake and unhappy, was asleep.

____

____

____

____

____

VI - 10 UNSCRAMBLING WORDS Name ______________________________

How good a geographer are you? How good a linguist? Do you recognize the names of the following countries? Each is the name of a real country, but the order of the letters has been scrambled. Can you unscramble them?

1. side in ona ____________________
2. skip a tan ____________________
3. u s a sir ____________________
4. u pay a rag ____________________
5. gay kantina ____________________
6. retina nag ____________________
7. dots clan ____________________
8. ran yow ____________________
9. i grab ula ____________________
10. lip hips pine ____________________

VI - 11 SENSORY APPEAL

Name ______________________________

The following descriptions will appeal to your senses of sight, sound, smell, taste, and touch. Read each description and then tell which sense (or senses) is involved.

1. Suddenly Meg felt a violent push and a shattering as though she had been thrust through a wall of glass. ____________________

2. . . .the air about them was moving with the delicious fragrance that comes only on the rarest of spring days when the sun's touch is gentle and the apple blossoms are just beginning to unfold. ______________

   ____

3. The grasses of the field were a tender new green. . . .____________

4. . . .its peak was lost in a crown of puffy white clouds. __________

5. Mrs. Whatsit's unoiled-door-hinge voice was warm with affection and pride. ________________

6. . . .wings made of rainbows, of light upon water, of poetry. ________

   ____

7. . . .a rich voice with the warmth of a woodwind, the clarity of a trumpet, the mystery of an English horn.____________________

8. . . .and the radiance of the smile was as tangible as a soft breeze, as directly warming as the rays of the sun. ________________

9. . . .trees tossing in the frenzied lashing of the wind. ____________

10. . . .The furnace purred like a great sleepy animal. ______________

11. . . .Her eyes were bright, her nose a round, soft blob, her mouth puckered like an autumn apple.________________________

12. . . .Fortinbras streaked in, wet and shiny as a seal.______________

13. Up above them the wind made music in the branches. _______________

14. The late afternoon light had a greenish cast which the blank windows reflected in a sinister way. __________________________

15. Up in one of the elms an old crow gave its raucous cry, and a woodpecker went into a wild ratatatat. ________________

VI - 12 CHOOSING THE RIGHT WORD

Name ______________________________

Use one of the following words in each blank below:

legible
uncooperative
frenzy
affection
obscure
exclusive
dilapidated
naive
authoritative
belligerent
pride
compulsion

1. "Let's be ______________________________," Charles Wallace said.
2. In a ________________________________Boston rocker sat a plump little woman.
3. "Do you enjoy being the most ______________________________child in school?"
4. It might help if Meg's handwriting was more ______________________.
5. Mrs. Which's ________________________________voice called out, "Qquiett, chillldd!"
6. The trees were lashed into a violent ______________________.
7. "The atmosphere is so thin here," Mrs. Whatsit said, "that it

   does not ______________________________your vision as it would at home.
8. "Mrs. Whatsit is young and ____________________________.
9. Mrs. Whatsit's unoiled-door-hinge voice was warm with ______________

   ____.
10. "It was because I had a __________________________, a feeling I just had to come to that particular place at that particular moment."

VI - 13 SOME POEMS TO ENJOY Name ______________________________

WINTER NIGHT

by

Mary Frances Butts

Blow, wind, blow!
Drift the flying snow!
Send it twirling, whirling overhead!
There's a bedroom in a tree
Where, snug as snug can be,
The squirrel nests in his cozy bed.

Shriek, wind, shriek!
Make the branches creak!
Battle with the boughs till break o' day!
In a snow-cave warm and tight,
Through the icy winter night
The rabbit sleeps the peaceful hours away.

Call, wind, call,
In entry and in hall,
Straight from off the mountain white and wild!
Soft purrs the pussy-cat,
On her little fluffy mat,
And beside her nestles close her furry child.

Scold, wind, scold,
So bitter and so bold!
Shake the windows with your tap, tap, tap!
With half-shut dreamy eyes
The drowsy baby lies
Cuddled closely in his mother's lap.

by

Elizabeth Coatsworth

Cold winter now is in the wood,
The moon wades deep in snow.
Pile balsam boughs about the sills,
And let the fires glow!

The cows must stand in the dark barn,
The horses stamp all day.
Now shall the housewife bake her pies
And keep her kitchen gay.

The cat sleeps warm beneath the stove,
The dog on paws outspread;
But the brown deer with flinching hide
Seeks for a sheltered bed.

The fox steps hungry through the brush,
The lean hawk coasts the sky.
"Winter in the wood!" the winds
In the warm chimney cry.

VI - 14 POETRY Name ______________________________

STOPPING BY WOODS ON A SNOWY EVENING
by
Robert Frost

Whose woods these are I think I know.
His house is in the village though;
He will not see me stopping here
To watch his woods fill up with snow.

My little horse must think it queer
To stop without a farmhouse near
Between the woods and frozen lake
The darkest evening of the year.

He gives his harness bells a shake
To ask if there is some mistake.
The only other sound's the sweep
Of easy wind and downy flake.

The woods are lovely, dark and deep.
But I have promises to keep,
And miles to go before I sleep,
And miles to go before I sleep.

VI - 15 UNDERSTANDING POETRY Name ____________________

This is one of Robert Frost's best known poems. Discuss the following questions to see if you can discover why this poem is so popular.

1. a. What does the title tell us about the time of day? about the weather?

   b. Is the man riding or driving the horse? How do you know?

   c. Does the man know who owns the woods? Where does the owner live?

   d. Does the horse show any impatience? How?

   e. What decision does the man have to make? What does he decide?

2. a. The above questions are about the surface meaning of the poem. Do you think Frost may have had deeper meanings in mind when he wrote the poem?

   b. Explain the idea of a symbol.

   c. The first symbol in the poem is the owner. What is the "something else" that he may stand for?

   d. The second symbol in the poem is the horse. Remember that he is impatient. What do you think he could symbolize?

   e. Are there other symbols in the poem, other things that could stand for something else?

   f. Why do you think Frost repeats the last line?

VI - 16 FIGURATIVE LANGUAGE Name ____________________________

Examine the first sentence below. Is the road really a ribbon? Why does the writer use this figure of speech? Discuss the other examples.

1. a. The road was a ribbon of silver.

   b. The moon was a ghostly galleon.

   c. The sumach is a gypsy queen.

   d. The sun is an Indian girl.

2. a. . . . But when the trees bow down their heads.

   b. Walls have ears.

3. a. Their outlines seemed blurred; colors ran together as in a wet color painting.

   b. . . . she was not completely materialized . . . and embracing her now would have been like trying to hug a sunbeam.

   c. . . . because the postmistress, with a sugary smile, had asked if she'd heard from her father lately.

   d. She knew that she had a body, but it was as lifeless as marble.

   e. Her words were blunted by the stone tongue.

   f. Her disappointment in her father's human fallibility rose like gorge in her throat.

   g. . . . for a moment Calvin stopped pawing the ground like a nervous colt.

Write two sentences using figurative language. (You may write on the reverse side.)

____

____

____

____

____

VI - 17 VOCABULARY

Name ______________________________

You will need to know the meanings of these words when we play Password. Be prepared to define each one and use it in a sentence.

belligerent

sarcastic

legible

naive

exclusive

tangible

transparent

infuriate

hysterical

repellent

pedantic

annihilate

deviate

arrogance

unkempt

ominous

dais

cerebrum

VI -- 18 WORDS THAT DESCRIBE Name ______________________________

How many words can you think of for each list?

Sight **Sound**

______________ ________________ ______________ ________________

______________ ________________ ______________ ________________

______________ ________________ ______________ ________________

______________ ________________ ______________ ________________

______________ ________________ ______________ ________________

______________ ________________ ______________ ________________

Taste **Touch** **Smell**

__________________ __________________ __________________

__________________ __________________ __________________

__________________ __________________ __________________

__________________ __________________ __________________

__________________ __________________ __________________

VI - 19a THE POETRY OF ROBERT FROST Name ____________________

THE PASTURE

I'm going out to clean the pasture spring;
I'll only stop to rake the leaves away
(And wait to watch the water clear, I may):
I sha'n't be gone long. -- You come too.

I'm going out to fetch the little calf
That's standing by the mother. It's so young
It totters when she licks it with her tongue.
I sha'n't be gone long. -- You come too.

What does the story tell?

Who is telling the story?

Who is invited to come along?

What farm animal is mentioned? What is said about it?

How long does the speaker expect to be gone?

What is the rhyme scheme?

What line is rich in alliteration?

VI - 19b THE POETRY OF ROBERT FROST Name ____________________

BLUEBERRIES

"You ought to have seen what I saw on my way
To the village, through Patterson's pasture today:
Blueberries as big as the end of your thumb,
Real sky-blue, and heavy, and ready to drum
In the cavernous pail of the first one to come!
And all ripe together, not some of them green
And some of them ripe! You ought to have seen!"

"I don't know what part of the pasture you mean."

"You know where they cut off the woods -- let me see --
It was two years ago -- or no! -- can it be
No longer than that? -- and the following fall
The fire ran and burned it all up but the wall."

"Why, there hasn't been time for the bushes to grow.
That's always the way with the blueberries, though:
There may not have been the ghost of a sign
Of them anywhere under the shade of the pine,
But get the pine out of the way, you may burn
The pasture all over until not a fern
Or grass-blade is left, not to mention a stick,
And presto, they're up all around you as thick
And hard to explain as a conjuror's trick."

"It must be on charcoal they fatten their fruit.
I taste in them sometimes the flavor of soot.
And after all really they're ebony skinned:
The blue's but a mist from the breath of the wind,
A tarnish that goes at a touch of the hand,
And less than the tan with which pickers are tanned."

Why is this poem called a dialogue? How many persons speak?
How large are the blueberries?
Why is the pail called cavernous?
Where are the blueberries growing?
Why are blueberries compared to a conjuror's trick?
What other word suggests magic?
What figure of speech is "fatten their fruit"?
Why are the blueberries called "ebony skinned"?
What figure of speech is contained in line 25?

VI - 19c THE POETRY OF ROBERT FROST Name ______________________

GOOD HOURS

I had for my winter evening walk —
No one at all with whom to talk,
But I had the cottages in a row
Up to their shining eyes in snow.

And I thought I had the folk within:
I had the sound of a violin;
I had a glimpse through curtain laces
Of youthful forms and youthful faces.

I had such company outward bound.
I went till there were no cottages found.
I turned and repented, but coming back
I saw no window but that was black.

Over the snow my creaking feet
Disturbed the slumbering village street
Like profanation, by your leave,
At ten o'clock of a winter eve.

Who goes for a walk? When?

What does he see? Does he see the same thing on the way back?

What does he hear? What sound is heard on his return?

Do the cottages seem to be company for the speaker?

How does he make them sound human?

Is the speaker old or young? How do you know?

How many stanzas does this poem contain? How many lines?

What is the rhyme scheme?

VI - 19d THE POETRY OF ROBERT FROST Name ____________________

A YOUNG BIRCH

The birch begins to crack its outer sheath
Of baby green and show the white beneath,
As whosoever likes the young and slight
May well have noticed. Soon entirely white
To double day and cut in half the dark
It will stand forth, entirely white in bark,
And nothing but the top a leafy green —
The only native tree that dares to lean,
Relying on its beauty, to the air.
(Less brave perhaps than trusting are the fair.)
And someone reminiscent will recall
How once in cutting brush along the wall
He spared it from the number of the slain,
At first to be no bigger than a cane,
And then no bigger than a fishing pole,
But now at last so obvious a bole
The most efficient help you ever hired
Would know that it was there to be admired,
And zeal would not be thanked that cut it down
When you were reading books or out of town.
It was a thing of beauty and was sent
To live its life out as an ornament.

What happens as a young birch tree grows?

What two colors are mentioned twice in the beginning of the poem?

In this poem what does line 13 mean?

This poem has several similes. Can you find them?

What line is rich in alliteration?

Does the poet value the birch tree? Why?

VI - 19e THE POETRY OF ROBERT FROST Name ______________________

THE RUNAWAY

Once when the snow of the year was beginning to fall,
We stopped by a mountain pasture to say, "Whose colt?"
A little Morgan had one forefoot on the wall,
The other curled at his breast. He dipped his head
And snorted at us. And then he had to bolt.
We heard the miniature thunder where he fled,
And we saw him, or thought we saw him, dim and gray,
Like a shadow against the curtain of falling flakes.
"I think the little fellow's afraid of the snow.
He isn't winter-broken. It isn't play
With the little fellow at all. He's running away.
I doubt if even his mother could tell him, 'Sakes,
It's only weather.' He'd think she didn't know!
Where is his mother? He can't be out alone."
And now he comes again with clatter of stone,
And mounts the wall again with whited eyes
And all his tail that isn't hair up straight.
He shudders his coat as if to throw off flies.
"Whoever it is that leaves him out so late,
When other creatures have gone to stall and bin,
Ought to be told to come and take him in."

What does the poem say? What time of the year is it?

To whom does the colt belong? Where is it?

Pick out the good verbs in lines 4 and 5. Why are they effective?

What does the colt look like against the "curtain of falling flakes"? Has falling snow ever made you think of a curtain? Why does the author use this image?

What does line 15 mean?

The colt shakes off snow in the same way as a colt usually does what else?

How many persons see the colt in the pasture? Are they pleased that he is there?

VI - 19f THE POETRY OF ROBERT FROST Name ______________________

THE EXPOSED NEST

You were forever finding some new play.
So when I saw you down on hands and knees
In the meadow, busy with the new-cut hay,
Trying, I thought, to set it up on end,
I went to show you how to make it stay,
If that was your idea, against the breeze,
And, if you asked me, even help pretend
To make it root again and grow afresh.
But 'twas no make-believe with you today,
Nor was the grass itself your real concern,
Though I found your hand full of wilted fern,
Steel-bright June-grass, and blackening heads of clover.
"Twas a nest full of young birds on the ground
The cutter-bar had just gone champing over
(Miraculously without tasting flesh)
And left defenseless to the heat and light.
You wanted to restore them to their right
Of something interposed between their sight
And too much world at once -- could means be found.
The way the nest-full every time we stirred
Stood up to us as to a mother-bird
Whose coming home has been too long deferred,
Made me ask would the mother-bird return
And care for them in such a change of scene
And might our meddling make her more afraid.
That was a thing we could not wait to learn.
We saw the risk we took in doing good,
But dared not spare to do the best we could
Though harm should come of it; so built the screen
You had begun, and gave them back their shade.
All this to prove we cared. Why is there then
No more to tell? We turned to other things.
I haven't any memory -- have you? --
Of ever coming to the place again
To see if the birds lived the first night through,
And so at last to learn to use their wings.

This poem is written as though the poet were speaking to a particular person. To whom is it addressed?

What type of person do you think the man who cut the hay is? Do you think he is kind? Is there anything in the poem that tells you he likes to have fun? Can he also be serious?

Why is there some question as to whether the mother bird will return?

Did this incident happen many years before the poet wrote the poem? How do you know?

Do you think the poet is reproaching himself and his friend for not returning to check on the little birds?

Do you think the poet is saying that sometimes, when we fail to do certain things, later in life we may regret the omission?

VI - 19g THE POETRY OF ROBERT FROST Name ____________________

GATHERING LEAVES

Spades take up leaves
No better than spoons,
And bags full of leaves
Are light as balloons.

I make a great noise
Of rustling all day
Like rabbit and deer
Running away.

But the mountains I raise
Elude my embrace,
Flowing over my arms
And into my face.

I may load and unload
Again and again
Till I fill the whole shed,
And what have I then?

Next to nothing for weight,
And since they grew duller
From contact with earth
Next to nothing for color.

Next to nothing for use.
But a crop is a crop,
And who's to say where
The harvest shall stop?

In this poem spades are compared to ____________________?

Bags full of leaves are compared to ________________?

Noise of rustling is compared to ________________?

What does the image of "mountain" in the third starza refer to? Can you picture the poet trying to pick up a big load of leaves with his arms and having them slip out?

Does the poet consider the leaves valuable for weight? for their color? for their usefulness?

Why does he gather them?

How many lines does each stanza contain? How many stanzas?

What is the rhume scheme?

VI - 20 USING YOUR IMAGINATION Name ______________________

Which of the following sentences might a scientist have written? a poet? an ancient believer in gods and goddesses?

1. Clusters of paper-white narcissus filled the atmosphere with a fragrance that lingered with me for hours.
2. The goddess Nemesis was so angered by the conceit of the handsome Narcissus that she changed him into a flower bearing his name.
3. The narcissus is a member of Old World bulbous herbs of the amaryllis family.

Follow the directions below as you write a sentence or two about a rainbow, lightning, a flower, a bird, or any other object or phenomenon.

1. First, imagine that you are an ancient believer in gods and goddesses.

   ____

   ____

   ____

2. Now, imagine that you are a scientist. Write about the same subject you chose for number 1 above.

   ____

   ____

   ____

3. Write about the same subject pretending that you are a famous poet.

   ____

   ____

   ____

Note: This exercise was taken from a testbook written by the investigator. (David A. Conlin and Nell C Thompson, Our Language Today, New York: American Book Company, 1967.)

VI - 21 INVERTED WORD ORDER Name ____________________

The sentences below are called "inversions." Rewrite each sentence as you would probably say it.

1. Doomed was Brynhild on the instant she went against Odin's will.

   ____

   ____

   ____

2. Sorrowful was Odin All-Father that the wisest of his battle-maidens might never appear in Asgard.

   ____

   ____

   ____

3. Very brave and very noble was Agnar.

   ____

   ____

   ____

Write an inversion of each of the following sentences:

1. The battle-maidens were beautiful and fearless.

   ____

   ____

2. Brynhild was the youngest of all the battle-maidens.

   ____

   ____

3. Brynhild was arrayed in flashing battledress.

   ____

   ____

VI - 22 THINKING ABOUT SENTENCES Name ____________________________

Classify the groups of words below into one of three categories:

(1) Suitable for either oral or formal use
(2) Suitable for oral use only or in writing informal conversation
(3) Does not constitute a sentence

__________ 1. My blue sweater.

__________ 2. Under the bed.

__________ 3. I think I'll wear the red one.

__________ 4. A steam engine which.

__________ 5. Nuclear fuels may provide needed energy.

__________ 6. Consult the encyclopedia.

__________ 7. Saw a field Richard.

__________ 8. From.

__________ 9. This mark is a macron.

__________10. On the blackboard that the.

__________11. He drew.

__________12. Who may go with you.

__________13. Who may go with you?

__________14. Many brave men.

__________15. Who died on the field of battle.

__________16. Won't be there.

__________17. Ouch!

__________18. Once in a while.

__________19. A Wrinkle in Time.

__________20. A Wrinkle in Time is the best book I ever read.